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MILITARY FORECASTING: COLONEL RYBKIN'S SUGGESTED METHODOLOGY

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 7, 1980 signed to press
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[Article by Honored Worker of Science of the RSFSR, Professor and Doctor of Philosophical Sciences Col Ye. Rybkin: "Marxism-Leninism as the Methodological Basis for Forecasting Military Events"; passages enclosed in slantlines printed in boldface]

[Text] The contemporary international situation is characterized by a new aggravation in the opposition between forces of progress and reaction. The strengthening of real socialism and the growing process of national and social-class liberation is giving rise to new fits of anger and rage and to attempts at reprisals toward freedomloving peoples in the ruling layers of imperialist countries. This once again confirms Lenin's words that "the bourgeoisie is prepared for all savageries, bestialities and crimes to defend the perishing capitalist slavery."¹ Imperialism is by its nature aggressive. As Lenin pointed out, its characteristic trait and vital manifestation² is militarism, since the bourgeoisie cannot ensure its rule without reliance on military force. Therefore imperialism is a constant source of war and military conflicts.

U.S. and NATO imperialist policy, to which methods of the crudest violence are organically inherent, continuously generates armed conflicts, overthrows and local wars. Such actions directly or indirectly affect the interests of the socialist community, influence the course of the world revolutionary process and often present a serious threat to the interests of universal peace.

A sharp rise in the aggressive aspirations of American imperialism is typical of the present-day international situation. Being led by the military-industrial complex and defending the class interests of monopoly capital, the J. Carter administration is whipping up tensions, attempting to disrupt detente and return the world to the "cold war" times, and openly declaring its claim to the role of world gendarme.

Lately the Maoist leadership of China--a country which has been transformed from a reserve of imperialism into its active ally--has been playing a more and more repulsive role in the struggle to disrupt detente. The PRC government supports all destabilizing phenomena of international life, and above all any kind of counterrevolutionary mutinies and overthrows and aggressive actions by imperialist countries. Blinded by shameless nationalism, Chinese leaders today have joined the openly militaristic and hegemonic platform of the U.S. administration.

The present international situation thus attests to the fact that the forces of world reaction have undertaken a counteroffensive against detente policy and so, along with a real possibility for activation of the detente process, the very real possibility of military conflicts and crises of the most diverse content also is preserved in the near future.

All this makes the problem of scientific forecasting of the military-political situation in various parts of the world and of probable steps of political forces in the international arena during nascent or developed military events exceptionally current for ensuring the security of our Motherland, the socialist community and the achievements of socialism as a whole. A study of the sources, causes and conditions of conflicts permits the CPSU and Soviet government to determine their attitude toward them promptly and take steps to prevent them or resolve them in a peaceful manner.

The concept of /"military events"/ is rather broad. Two groups should be included in it: of an internal (for individual countries) and an international nature. /Action in one form or another by armed forces for political purposes are an overall indication of military events./ Consequently military events must be taken to mean wars, overt armed conflicts with armies and navies employed by both sides, as well as unilateral actions of military coercion: intervention and occupation on the part of external forces; counterrevolutionary overthrows and armed uprisings within a country.

Foresight of strictly military events cannot be carried out in isolation from a study of other processes. To the contrary, it is possible only on the basis of the sum total of economic, political, ideological, geographic, class, national and other factors operating in the international arena. In essence, a conclusion as to the probability or inevitability of a particular international or internal military event and a forecasting of ways in which it will develop is the product of a full-scale specific social-historic study.

/Foresight is a special kind of human knowledge either about what exists but still has not been encompassed by our experience, or about what exists merely as a possibility and possesses a certain degree of probability of becoming reality after a certain amount of time passes./ It may be spontaneous-empirical or scientific. Scientific social foresight, fully realizable only on the basis of Marxist-Leninist methodology, is that

forecasting of a future event based on a knowledge of the operating mechanism of objective laws of society's development and on an analysis of historical experience and the data of present-day reality. Foresight of military and other social events is directly linked with historical science, including military-historical science. The two chief reasons for such a relationship should be pointed out here. /First of all,/ a study of the military experience of past human endeavor in typical historical situations for comprehending the present and for better orientation in the expected future is a most important task of military-historical science. Herein lies the high meaning of all historical (including military-historical) science. For example, that is how V. I. Lenin very categorically explained his handling of the study of historical materials. He wrote that "...I was looking at the past only from the standpoint of what will be needed for tomorrow or the day after tomorrow for our policy."³

/Secondly,/ historical experience has still an even narrower, more specific importance for the study of contemporary acute oppositions, among which military events are included. It is well known that application of statistical methods is very effective for forecasting the probability of expected processes and their qualitative features and peculiarities. The more data accumulated on similar, characteristic phenomena of past times, the more precise is the conclusion as to the degree of necessity and probability of a specific course of anticipated events. But using historical experience for these purposes also conceals a danger, since externally similar historical phenomena may differ profoundly in their essence. Analogies of events which occurred in different eras and were caused by different social-economic features are particularly dangerous. Suffice it to mention the error of the right revisionists of Marxism in their appraisal of the social-political character of World War I, which consisted of its identification with the liberation wars of the pre-imperialist era. Works of Lenin subject such errors to merciless criticism. Nevertheless, it is also impossible to belittle the importance of historical analogies. It is all a matter of the method employed for evaluating and comparing historical and contemporary conflict situations.

The only /scientific method of military-political foresight and generalization of historical and contemporary military and social-political experience for these purposes is dialectical and historical materialism/--the nucleus of Marxist-Leninist methodology.

The supreme strength of the Marxist-Leninist methodology of studying social phenomena lies in the application of research principles of a materialistic understanding of history and dialectical logic.

/A materialistic understanding of history/ requires above all seeing at the basis of all social-historical phenomena the deciding role of the method of production, which defines the character of the social-economic formation, the appearance of particular ideas, and the work of political and other social institutions. On the surface military events act as the result of a decision of particular specific persons--heads of states and governments,

party leaders and so on. The role of particular individuals in history is of no small importance. Marxism-Leninism does not deny this. But when "talk turns to a study of the moving forces behind the motives of historic figures," wrote Engels, "--whether perceived or, as is very often the case, not perceived--and which in the final account form genuine moving forces of history, we must bear in mind not so much the motives of individuals, albeit most prominent ones, as those motives which set in motion large masses of people and entire nations and, in each given nation in turn, entire classes."

In forecasting we must consider above all /the character and features of the era./ The character of the modern era is clearly defined in the CPSU Program as an era with its primary content being a transition from capitalism to socialism, an era of struggle of two opposing social systems, an era of socialist and national liberation revolutions, an era of the downfall of imperialism and elimination of the colonial system, an era where more and more nations shift to the path of socialism, and an era of the triumph of socialism and communism on a worldwide scale.⁵

It is also important to bear in mind that the circumstance of the contemporary era is characterized by a scientific-technical revolution unprecedented in scope and by the creation of means of mass destruction. This weapon of unprecedented destructive force in the hands of reactionary forces, particularly the Americans and certain other imperialists and hegemonists striving for world domination, has been transformed into a terrible threat to mankind's existence with which all states and nations must reckon.

Consequently, to forecast military events in our time the analyst must consider /factors containing specific material bases as well as the spiritual phenomena and qualitatively different political decisions stemming therefrom./ Above all, he must delve deeply into the reasons for the periodical ebb and flow of activeness of the source of military danger rooted in the very nature of imperialism and in its economic foundation and political system, characterized by maximum militarization.

The nature of imperialism in forecasting any military event is assessed as a steadfast motivating force of military actions. It has been established that the aggressiveness of imperialism invariably rises in response to successes of liberation movements, since it opposes them because of its class nature. Temporary drops in aggressiveness are explained by serious defeats of imperialism (for example, in Vietnam) causing turbulent antimilitary mass movements, by active pressure from the politics of peaceloving states, by an awareness of the nuclear danger (the period since the Caribbean crisis), by aggravation of contradictions within the imperialist camp and so on.

At the present time a new wave of aggressiveness of imperialism has arisen in its main citadel, the United States. In just the last half-year Washington policy, dictated by the interests of the military-industrial complex,

has led to such shameful acts as putting the ratification of the SALT II Treaty on ice, the decision on production and deployment in Europe of new medium-range nuclear missiles, formation of a "rapid deployment force" with openly gendarme functions, and a further build-up in the military budget, which reached the astronomical sum of more than \$160 billion annually. And over the next five years plans are to increase it to \$253 billion.⁶ Taking advantage of events in Iran and Afghanistan, American imperialism and its satellites are whipping up a military psychosis, thus shoving mankind onto the "cold war" path, as happened decades ago.

In the more complicated international situation, where enemies of peace are conducting a counteroffensive against detente, the Maoist leaders of China are conducting a treacherous policy with respect to the fundamental interests of world nations. It is forming a bloc with the most reactionary, most adventurist forces and is setting a course toward fanning tensions. It was stated in PRAVDA on 26 May 1980 that facts indicate that Chinese strategy has remained the very same as under Mao Zedong. The chief goal of the Maoists' strategy is for China to win the position of predominant force dictating its will on other nations and countries.

/The role of states of the socialist community headed by the USSR/ is quite understandable and unambiguous in foreseeing the possibility of military events. The role is defined in numerous official documents of the CPSU and Soviet government and is secured by law in the USSR Constitution. Comrade L. I. Brezhnev said at the 25th CPSU Congress: "The main element in our policy with respect to capitalist states has been and continues to be a struggle for establishing principles of peaceful coexistence, for a firm peace, for a reduction and, in the future, an elimination of the danger that a new world war will break out. . . . But . . . so long as militaristic circles conduct the arms race our country, together with other participants in the Warsaw Pact, will strengthen this military-political alliance."⁷

The developing countries play a very complex role in the development of military events. Here is where an absolute majority of conflicts occur, arising both during the opposition of internal progressive and reactionary forces (usually instigated by imperialists and Maoists) as well as directly unleashed by the latter.

Foresight of military events in developing countries is especially difficult, since their internal social-economic and political structures differ by an unusual complexity, mobility and mixed character. In order to forecast the social direction of possible conflicts with neighboring countries and internal overthrows within them, consideration must be given to the immature nature of social relations, the weakness of the primary classes characteristic of the modern era, and the almost ubiquitous and considerable influence of the petty bourgeoisie, which is inclined toward various kinds of military adventures. Meanwhile, revolutionary overthrows accomplished by progressive forces also are possible such as, for example, in Ethiopia, and revolutions of the Iranian type which are unbelievably complex in their social substance.

/The determination of the social character of a military conflict or overthrow being forecast is an exceptionally important point,/ because the position of a country's leadership with respect to the given event depends on its accuracy. It is no less essential to foresee the development and outcome of a military act, to consider the correlation of military and other forces participating in a conflict, or to determine their place and role in the overall system of world economics and politics, the importance of such factors as the reality of goals set by the leaders, the expediency and justification of particular steps and so on. These factors must be evaluated based on such principles of dialectics as the organic combination of scientific objectivity and party spirit, the comprehensive nature of analysis and separation of the main link from the chain of events, the development and revelation of contradictions of an internal and external character, and an assessment of the qualitative and quantitative changes of the subject.⁸

Military history, especially the experience of the classics of Marxism-Leninism in evaluating various military conflict situations, provides abundant material with lessons which must be used for forecasting military events. Take for example the application of principles of party spirit and scientific objectivity in forecasting the possible outcome of an armed clash or in determining the expediency and necessity for conducting military operations.

The example of preparing and concluding the Brest Peace in 1918 is instructive in this regard. At that time German imperialism was developing an offensive against the young Soviet republic, threatening to destroy it by force. A war in defense of the socialist homeland was just and needed from the standpoint of social character and historical role. Based only on this, the leftist communists spoke for conducting a war, hoping that it would "prompt" a revolution in Europe. But they did not take account of the actual correlation of opposing forces and overestimated the maturity of the revolutionary situation in Germany. The young Soviet republic still had no army. A breather was required for its activation. They could not hope for immediate support from the German proletariat. Therefore, on the basis of a profoundly objective scientific, comprehensive estimate of the situation, which is a mandatory condition for communist party spirit, Lenin concluded the necessity for an immediate cessation of military conflict and the forced conclusion of a most unfavorable and even shameful peace. As a result of this wise decision a tactical (in the historical sense) loss led to a strategic victory, since the subsequent development of events led to the defeat of German imperialism.

Long-range forecasting is especially important and complicated. The classics of Marxism-Leninism have provided brilliant examples of this. For example, F. Engels' foresight of the inevitability of a major war in Europe and a subsequent revolutionary downfall of various empires is well known.⁹ This occurred more than a quarter-century before the beginning of World War I on the basis of a study of the historical development of relationships among the leading bourgeois states in the 19th century and their prospects.

Engels thoroughly studied the ever more tightly drawn knot of antagonistic relations in this leading region of the world and carefully analyzed the contradictions concealed within it. He concluded that their further quantitative growth would lead to an inevitable explosion and to a conflict which would lead society to leap into a new qualitative status.

Forecasts by classics of Marxism-Leninism with respect to social consequences of particular military clashes are astoundingly profound. For example, at the very beginning of the Franco-Prussian War, Marx and Engels concluded the inevitability of the downfall of Louis Bonaparte's empire. They wrote: "No matter how the war between Louis Bonaparte and Prussia ends, the knell for the Second Empire already has sounded in Paris."¹⁰

The entire strategy and tactics of the Bolshevik Party with respect to World War I was built on Lenin's comprehensive, detailed dialectical analysis of concrete conditions of the era of imperialism, which generated the given war, and on foresight of the only possible solution to it for progress--revolution.

In forecasting the probability of the outbreak, course and outcome of armed struggle, along with a thorough study of the correlation of economic, moral and strictly military forces of the states participating in the conflict as well as those indirectly linked with it, consideration also must be given to the /internal social-economic relations/ in the warring states, since the conformity of the goals of the war or other military action to the interests of progress and the popular masses and, consequently, their practicability, depends largely on this. They have a fundamental effect on the organization of military actions, the struggle to prevent war, a country's capability to find a way out of a conflict, and so on. This is persuasively confirmed by classic works of F. Engels and V. I. Lenin.

Lenin's book entitled "Grozyashchaya katastrofa i kak s ney borot'sya" [A Threatened Catastrophe and How to Fight It] examines the situation which formed in Russia in the summer of 1917, when a continuation of the war threatened Russia with economic and military catastrophe. Lenin wrote: "...To make Russia capable of defending herself and to achieve the 'miracles' of mass heroism, we must remove all the old ways with 'Jacobinic' mercilessness and regenerate and revive Russia /administratively/. . . . Only an utterly consistent break with the capitalists both in domestic and foreign policy is capable of saving our revolution and our country, squeezed in the iron vises of imperialism."¹¹

And let's take the 1930's. Comrade L. I. Brezhnev points out that "our party foresaw the possibility of an armed clash against the forces of imperialism and readied the country and people for defense. The social-economic achievements of the prewar five-year plans and the ideological-political unity of Soviet society forged while building socialism laid the foundations of the victory won by our people in the Great Patriotic War."¹²

Historical experience also indicates that /the status of world politics and economic ties/ as well as /public opinion,/ especially of late, influences the conditions and prospects for the development of military events (to a greater degree international and, to a lesser degree, internal).

The 25th CPSU Congress and all progressive forces on the globe highly praised the victory of the Vietnamese people over American imperialism. But it is quite clear that this victory would have been impossible had there not been a powerful socialist community supporting Vietnam with all possible means. The solidarity with Vietnam of other nations fighting against imperialism also played a large part.

The U.S. defeat in Vietnam had an effect on military-political forecasting in imperialist countries. The capitalistic science centers in the 1970's sharply increased the number of predictions in their forecasts that the imperialists' use of armed force for achieving political goals would not bring them the desired results. For example, A. Beaufre, a well-known French military theorist and historian, writes in the book "Crises and Wars": "The war in Vietnam demonstrated that not one great power is capable of turning the development of history backward in any part of the world it pleases."¹

World economic ties play an essential role in forecasting military conflicts. The United States has long nourished plans for armed actions against Near and Middle Eastern states for the purpose of influencing their "oil policy." But such actions by the Americans affect the interests of certain European states and Japan. For this reason it is not easy even for such a world gendarme as American imperialism to dare take armed actions without approval of allies in the modern era. What has been said reaffirms the proposition of how important dialectical principles of the comprehensive nature of the investigation, revelation and assessment of internal and external ties and contradictions of reality are in forecasting military events.

In conclusion it should be noted that absolute accuracy in forecasting military events is difficult to achieve. It is not by chance that it usually bears a probabilistic character. In a number of cases recommendations of maximum reliability are needed, for example, for the government to make decisions of a military-political nature. This is especially important in the era of nuclear missiles, when hours and even minutes may have a decisive importance. Under such circumstances long-range foresight is supplemented and reinforced with urgent information on the aggressor's plans.

The present claims of American imperialism to the role of dominant world power are one of the primary reference points for forecasting military events. The adventuristic actions of the United States, NATO and everyone who supports them reinforce the danger of a thermonuclear catastrophe. But on the other hand, forces capable of curbing the aggressor also are growing. Our party's assessment of the historical perspective is optimistic. 1

rests on a scientifically founded confidence in the inevitable downfall of imperialistic aggressions. Our optimism is not passive. It assumes the active work of the CPSU, Soviet government, the entire socialist community and peace-loving forces of the planet aimed at curbing the aggressors.

Comrade L. I. Brezhnev said in response to questions of a PRAVDA correspondent: "Soviet citizens and our friends abroad can be sure that the Leninist foreign policy course is unwavering. It has been set by decisions of CPSU congresses and is embodied in all our foreign policy activities. This course combines a consistent love of peace with firm rebuff of aggression. It justified itself in the past decades and we will continue to follow it. No one will move us from this course."¹⁴

In the situation at hand, where Washington, supported by aggressive forces of other countries, has set a course for renewing the "cold war" and is rattling the saber, enemies of peace and progress still can create crises and conflicts and use the threat of wars. But no matter how they rage, the future lies not with them. Mankind inevitably overcomes all obstacles on the path to peace and prosperity and, as emphasized at an international meeting of communist and workers' parties of Europe for peace and disarmament on 28-29 April 1980 in Paris, this requires a maximum consolidation of all progressive forces and supreme vigilance toward intrigues of the aggressors.

FOOTNOTES

1. V. I. Lenin, "Polnoye sobraniye sochineniy" [Complete Collected Works], XXIII, 166.
2. Ibid., XVII, 187.
3. Ibid., XXXVIII, 136.
4. K. Marx and F. Engels, "Sochineniya" [Works], XXI, 307-308.
5. "Programma Kommunisticheskoy partii Sovetskogo Soyuza" [CPSU Program], Politizdat, 1976, p. 5.
6. PRAVDA, 22 April 1980.
7. "Materialy XXV s"yezda KPSS" [Materials of the 25th CPSU Congress], Moscow, Politizdat, 1976, pp. 16, 8.
8. The sum total of principles of dialectical logic must be applied in analyzing factors of military events, but in view of the limited nature of this article's task, it examines only the initial ones.
9. Cf. Marx and Engels, XXI, 361.

10. Marx and Engels, XVII, 3.
11. Lenin, XXXIV, 195, 197.
12. L. I. Brezhnev, "Leninskii kursom. Rech'i i stat'i" [With a Leninist Course: Speeches and Articles], Moscow, Politizdat, 1970, II, 90.
13. A. Beaufre, "Crises et guerres" [Crises and Wars], Paris, 1974, p. 44.
14. PRAVDA, 13 January 1980.

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NAVY DAY ARTICLE: ADMIRAL SOROKIN

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[Article by Member of Military Council and Chief of Political Directorate
of the Navy Admiral A. Sorokin: "Guarding the Sea Boundaries"]

[Text] Each year on the last Sunday in July the Soviet people and their Armed Forces celebrate Navy Day, established by USSR Council of People's Commissars Decree dated 23 June 1939.¹ They honor navymen, fleet veterans, the makers and creators of ships and modern combat equipment and weapons, and all those who by their labor reinforce the state's sea power. This year the navymen are celebrating their holiday in an atmosphere of nationwide political enthusiasm generated by preparations for the 26th CPSU Congress and by celebration of the 110th anniversary of Lenin's birth and the 35th anniversary of the Soviet people's Victory over fascist Germany in the Great Patriotic War.

Lenin attached great importance to the Red Fleet. He took a direct part in preparing the decree establishing it, which was signed by the Council of People's Commissars on 29 January (11 February) 1918.

The young Soviet Navy made a tangible contribution to victory over the enemies. For example, in the period from 13 through 31 October 1919 alone 6,500 seamen left Baltic ships to defend Petrograd. All workers of the Fleet political department and its sections became part of the navymen's detachments.² Navyman of the Volga, Northern Dvina, Astrakhan'-Caspian and Dnepr naval flotillas, which successfully defeated the White Guards at Civil War fronts, gave an excellent account of themselves. The combat annals of our Armed Forces contain forever the names of P. Ye. Dybenko, N. G. Markin, A. G. Zheleznyakov, N. A. Khovrin, I. D. Sladkov, I. P. Ul'yantsev, V. F. Polukhin and many other well-known organizers of the seamen's masses which demonstrated models of courage, fearlessness and selfless service to the cause of the Communist Party.

At the end of the Civil War the party had begun to restore the ravaged national economy and took steps for further reinforcing national defenses.

In March 1921 the 10th RKP(b) [Russian Communist Party (Bolshevik)] Congress approved a large-scale program for restoring and developing the Navy. As early as 1921 more than 1,200 navyman-party members working in civilian establishments or who had gone to the land front during the war were returned on instructions of the RKP(b) Central Committee. It was they who headed the work of reviving the Navy. In the following year the Leninist Komsomol assumed sponsorship of the Navy. The reinforcement of ships and units with party and Komsomol members permitted the Navy to be strengthened. Through the heroic efforts of the Soviet people and the navymen, the Baltic and Black Sea Fleets represented a well organized fighting force as early as 1928. The Caspian and Amur flotillas and detachments of military vessels on the Dniepr and Western Dvina were recreated successfully. The Baltic Fleet was awarded the Order of Red Banner on 23 February 1928 for outstanding revolutionary services, a heroic struggle in the Civil War and the titanic work of restoring ships.

The first serious test of the Navy's combat effectiveness and the personnel's moral-combat qualities consisted of combat operations on the Soviet-Manchurian border instigated by Chinese militarists in July 1929. The Special Far East Army and the Amur Naval Flotilla gave a crushing rebuff to the aggressors. The Amur Flotilla men almost completely destroyed the Sungari Flotilla of the Chinese militarists and eliminated a base of operations for an attack on our country. The flotilla and 63 of the most distinguished navymen were awarded the Order of Red Banner for mass heroism and courage.¹

There was an abrupt increase in the Soviet Union's economic and defense might on the basis of socialist industrialization and collectivization of agriculture conducted during the first five-year plans. This allowed a beginning of construction of a fleet meeting the interests of defending our Motherland. Soviet yards began building ships of the most varied classes: cruisers, submarines, destroyers, ASW ships, torpedo boats and minesweepers outfitted with Soviet combat equipment and weapons. By decision of the Communist Party and Soviet government, the Pacific Fleet was activated in 1932 and the Northern Fleet in 1933.

By the beginning of the Great Patriotic War the USSR Navy had in its order of battle 3 battleships, 7 light cruisers, 54 leaders and destroyers, 22 escort ships, 60 minesweepers, 287 torpedo boats, 212 submarines, more than 2,500 aircraft of naval aviation and 260 coastal artillery batteries.²

Fascist Germany's treacherous attack on our country hindered completion of plans for building a navy. But the enemy's surprise attack did not catch the fleets unawares. All of them were placed in full combat readiness simultaneously and repulsed his first attacks in an organized manner without losing a single warship or aircraft in the process. The Hitlerites also did not succeed in achieving another goal--preventing the ships' departure for sea by laying magnetic mines in the vicinity of our bases.

The Soviet Navy reliably ensured the strategic stability of maritime flanks of an enormous front. Together with the Ground Forces, it was defending maritime cities and naval bases, conducting offensive operations on maritime axes, landing amphibious forces, and successfully combating forces of the fascist fleet. Naval personnel wrote many heroic pages in the history of the Great Patriotic War.

It appeared the Baltic Fleet navymen had done the impossible by taking their Fleet in late August 1941 from Tallinn to Kronstadt under conditions of mine danger and the pressure of enemy artillery and aircraft. The Fleet's main body was saved. It filled in the ranks of the defenders of Leningrad. Baltic Fleet pilots were first to deliver strikes against Berlin in August 1941. Defenders of Hango Island, who for 165 days beat off enemy attacks, covered themselves with unfading glory. The names of naval pilots Heroes of the Soviet Union A. K. Antonenko, L. G. Belousov and P. A. Brin'ko, the brave landing personnel of Capt B. M. Granin and many other Hango personnel became the symbol of courage, combat vigor and military proficiency. Throughout the war heroic Kronstadt worthily performed the role of the fire shield of Leningrad. Baltic Fleet navymen tightly closed the approaches for fascist troops from seaward, making a substantial contribution to the 900-day defense of the cradle of the Great October Socialist Revolution.

The southern flank of the Soviet-German front was reliably screened by the Black Sea Fleet. The navymen were the heart of the defense of Odessa and Sevastopol', Kerch' and Novorossiysk. On the approaches to the Fleet stronghold of Sevastopol' alone the fascists lost up to 300,000 dead and wounded. Exploits of the heroes of Malaya Zemlya, who defended an important base of operations in a seven-month clash with the enemy at Novorossiysk, and of the Ol'shanets personnel who landed in March 1944 in the commercial port of the city of Nikolayev and held it until the arrival of the main body, will remain in the memory of generations.

Under Arctic conditions, Northern Fleet navymen together with troops of the Karelian Front disrupted the Hitlerites' attempt to take the Kola Peninsula and the important ice-free port of Murmansk. The Soviet border remained inviolable in a number of sectors of this front. Northern Fleet navymen dealt powerful blows against the enemy's sea lines of communication. In 1943 alone they destroyed 180 transports and ships and escorted 432 convoys on internal and external lines of communication. Despite the enemy's fourfold superiority in aircraft in the first period of the war, Northern Fleet pilots fought with astounding valor, resolve and proficiency in screening our troops and ships against the air pirates. For example, on 15 September 1941 seven Soviet fighters led by Party Member B. F. Safonov entered battle against 52 fascist divebombers and shot down 10 of them.

The Volga Naval Flotilla and some 100,000 navymen of other fleets and flotillas who fought as part of rifle divisions and naval rifle brigades took an active part in the legendary Battle of Stalingrad.⁵

The Azov, White Sea, Caspian, Ladoga, Onega and Chudskoye Flotillas were of considerable assistance to the troops. Sailors of the Danube Flotilla took part in freeing the peoples of Romania, Bulgaria, Yugoslavia, Hungary, Czechoslovakia and Austria from Hitler's yoke. The Dnepr Flotilla ended its combat path at Berlin.

In 1945 the Pacific Fleet and Red Banner Amur Flotilla took an active part in defeating the elite Kwantung Army, in freeing the people's of Korea and China, and in clearing enemies from the age-old Russian soil of South Sakhalin and the Kuriles.

Our country's Navy sank over 1,300 ships and auxiliary vessels and more than 1,400 transports of fascist Germany and its satellites during the war.⁶ Almost a half-million navymen were sent from the fleets and flotillas to take part in fighting on the land fronts. They fought the fascists bravely, setting examples of valor. Comrade L. I. Brezhnev defined the Navy's combat services as follows: "Is it really possible to ignore the heroism and courage of our grand sea eagles whose exploits on the Black and Baltic seas, in the cold waves of the Arctic Ocean and on the Pacific expanses wrote unforgettable pages in the history of the Great Patriotic War?"⁷

The Communist Party and Soviet government highly valued the navymen's exploits. Tens of ships and units were awarded orders and given the honorary title of guards for outstanding services displayed in the Great Patriotic War. More than 350,000 seamen, petty officers, officers, admirals and generals were decorated with orders and medals, more than 600 were given the title of Hero of the Soviet Union,⁸ while 7 received a second Gold Star.

Under Communist Party leadership, the Soviet people and their Armed Forces defeated the shock forces of world capitalism in World War II, defended the first socialist state in the world and helped the peoples of Europe and Asia throw off the yoke of German fascism and Japanese militarism. The correlation of forces in the international arena changed radically in favor of socialism. Reactionary forces were not able to reconcile themselves with such changes and soon after World War II ended they began to knock together blocs and alliances aimed against the USSR and other socialist states, and they began the arms race. Therefore the Soviet state had to ensure that its Armed Forces were powerful, that they possessed the most modern means for defending the Motherland--atomic and thermonuclear weapons and missiles--and that they kept all kinds of military equipment and weapons at the proper level.

In building the Armed Forces, the Communist Party and Soviet government proceeded from an assumption that victory in modern warfare can be achieved only through the efforts of all branches of the Armed Forces interacting closely. Considering that the United States and other NATO countries have large, multipurpose navies and plan on using them as one of the chief shock forces in a war against the USSR and the entire socialist community, the CPSU and Soviet government posed and solved in the postwar period the task of building a mighty oceangoing Soviet Navy capable of opposing naval forces of

capitalist states. Practical implementation of this decision began in the 1930's, when the country achieved success in missile building, atomic power engineering and radioelectronics, which opened up broad opportunities for creating fundamentally new ships, systems of armaments and naval technology.

Thanks to the Communist Party's daily concern and as a result of the imaginative quest by military leaders, scientists, engineers and designers, the proper paths of development of the Soviet Navy were found and a rational proportion was established in the arms and ship types. Nuclear-powered strategic submarines and missile-armed naval aviation became the chief shock force of our Navy. Submarines are the most sophisticated and most powerful modern warships with the duration of their continuous stay at sea and capability of developing high speed under water for a long time now being determined not by fuel reserves, but above all by the physical endurance of the personnel. The submarines are armed with long-range missiles and homing torpedoes with nuclear warheads. They are outfitted with up-to-date means for target detection and powerful radioelectronic gear. They are capable of hitting not only targets at sea from long range confidently, but also installations situated on shore and in the deep enemy rear. Their high mobility permits successful operation against groupings of surface ships and the pursuit and destruction of enemy submarines. For the first time in the world, Soviet nuclear-powered submarines made a group around-the-world underwater cruise in February-March 1966, dedicating it to the 23d CPSU Congress. They covered some 25,000 nm without surfacing, completely accomplishing the training missions.'

Many submariners have been decorated with orders and medals in peacetime for outstanding exploits and capable use of combat equipment. Over 20 persons have been given the title Hero of the Soviet Union.

The missile-armed naval aviation includes long-range, all-weather jet aircraft armed with missiles having conventional and nuclear warheads. They are capable of delivering strikes against large, highly mobile groupings of enemy surface ships and convoys in remote regions of the seas and oceans, as well as against his ports and naval bases. Naval aviation also includes ASW aircraft and helicopters with up-to-date means of combating submarines.

The shock and firepower of surface forces has risen significantly. They consist of combined units and units of guided missile cruisers and destroyers, torpedo boats and guided missile boats. ASW cruisers of the "Moskva" Class have high maneuverability and have aboard helicopters and other up-to-date means of combating submarines, as well as surface-to-air guided missiles. ASW cruisers of the "Kiev" Class are armed with the latest combat equipment, including jet aircraft, and they have excellent seaworthiness. New types of ships have appeared--landing ships of special design, hydrofoils and others. Air-cushion vessels are capable of moving above the water's surface, crossing shallow water areas and freely moving from water to land and back.

The naval infantry, renowned in the Great Patriotic War, has been recreated on a contemporary technical basis. It now can deliver powerful surprise attacks on the most important axes, against the rear and flanks of enemy maritime groupings, and can give reliable support to our ground forces.

The Navy's chief strength consists of its people. It has well trained cadres capable of mastering the equipment and ordnance rapidly and employing it capably. Over 90 percent of Navy personnel are rated specialists and every other soldier is an otlichnik of combat and political training. Almost all ships' officers have a higher education and are party or Komsomol members. Some 90 percent of seamen and petty officers are graduates of secondary schools or tekhnikums. Many navymen have a class rating in related specialties and can replace a comrade at his battle station. Seagoing and land-based warrant officers make up a large detachment in the Navy. These are people who have gone through the school of military service and have a good knowledge of the complex combat equipment aboard ships and in units. They are active assistants of officers in indoctrinating and training personnel.

Our Party's Central Committee and the CPSU Central Committee General Secretary, Chairman of the Presidium of the USSR Supreme Soviet Comrade L. I. Brezhnev personally display constant concern for the Navy. In recent years Leonid Il'ich has visited all fleets and has become thoroughly familiar with the life and service of the navymen. In 1978 he visited the Red Banner Pacific Fleet and last year visited the Black Sea Fleet navymen. His instructions and recommendations are a long-term program of action for all personnel which is being implemented diligently. Navymen are constantly improving their combat proficiency on long deployments, which are a school of naval, specialized and tactical training. The cohesiveness of crews and their ability to act under difficult conditions is worked out on long deployments.

Military councils, commanders, political workers, and party and Komsomol organizations perform a great deal of work to increase the effectiveness of combat training and the readiness of ships and units for battle. They mobilize the personnel for exemplary performance of military duty and for further strengthening of discipline. They bring up service personnel in a spirit of Marxism-Leninism and on the basis of Lenin's military-theoretical heritage and party instructions and documents. Various forms of political indoctrination work and mass agitation work are used for this purpose. It is difficult to overestimate the role of this work in raising the Navy's combat readiness. The CPSU Central Committee Decree dated 21 January 1967 and entitled "On Measures for Improving Party-Political Work in the Soviet Army and Navy" demonstrates the organic link and interconnection of party-political work and combat readiness of ships, units and combined units. It envisages measures to improve the structure of political entities and the political apparatus of combined units and ships.

Decisions of the 25th party congress and subsequent Central Committee plenums, the CPSU Central Committee decrees entitled "On Further Improvement

of Ideological and Political Indoctrination Work" and "On the 110th Anniversary of Lenin's Birth," and jubilee material involving preparation and celebration of the 35th anniversary of the defeat of fascist Germany contributed to the new upsurge in ideological indoctrination work and to an increase in the Navy's combat readiness.

This year navymen are participating in socialist competition with a special enthusiasm under the motto "Sacredly fulfill Lenin's behests, improve combat and political training, increase vigilance and always be ready to defend the Motherland and the great achievements of socialism." The movement for a worthy celebration of the 110th anniversary of Lenin's birth called to life new patriotic initiatives and an upswing in the struggle for outstanding ships and units, for foremost combined units and formations, and for the right to be called best in a specialty--the followers of wartime heroes. On the eve of the jubilee the best combined units, ships and units of the Navy were awarded an honorary Lenin Scroll in a solemn ceremony. This high honor for selfless military labor and fulfillment of socialist pledges for the 110th anniversary of Lenin's birth was bestowed on the collectives where comrades Ye. A. Tomko, S. N. Belyayev, I. N. Il'in, N. G. Oleynik, K. P. Ivanov, V. S. Golikov, V. G. Yegorov, N. A. Kravchenko, G. M. Sluchnikov, V. S. Istomin, V. N. Burov and N. V. Shikhov serve, and on the Kiev Higher Naval Political School, the Higher Naval Engineering School imeni V. I. Lenin and others.

Now, at the height of the summer training period, naval personnel are working persistently to fulfill their pledges. Words are not deviating from deeds with the initiator of socialist competition this year as well--the crew of the large ASW ship "Petropavlovsk" of the Red Banner Pacific Fleet. During the winter training period many thousands of nautical miles of seas and oceans were left astern. Under difficult conditions of a long deployment the ASW personnel performed their duty. There is good fame surrounding the crew of the nuclear-powered submarine "60 let Velikogo Oktyabrya" of the Red Banner Northern Fleet as well. Reserves in the struggle for a growth in combat schooling of each crew member are being used skillfully aboard this ship. In base and on ocean deployments the submariners accomplish combat missions imaginatively, with vim. The number of masters of military affairs increases constantly aboard ship. Over 60 percent of the submariners are 1st or 2d class specialists and a majority have mastered a related specialty. Every other subunit commander passed tests for independent control one level higher than the position he holds. This crew considerably reduced the time periods for making the ship combat ready. Ship-type training problems and combat exercises invariably are performed by the personnel with outstanding marks. Crews of the ASW cruiser "Leningrad," of the large landing ship "Donetskiy Shakhter," of the submarine where WO N. Khitsov is secretary of the party organization, of the training ship "Smolnyy," of the escort ship "Sovetskiy Azerbaydzhan" and many others are heading confidently on the right flank of competitors.

The appearance of the Soviet Navy on the World Ocean clearly was not to the liking of American imperialists, heads of a number of NATO states or the

Chinese militarists. To the accompaniment of the myth of the "Soviet military threat," they contrive to discover signs of nonexistent "Soviet military bases" in various parts of the world for purposes of provocation and ascribe aggressive intentions to our Navy. The Soviet Navy threatens no one, but it always is ready, as are all branches of the Armed Forces, to protect the state interests of the Land of Soviets and the entire socialist community reliably and to cool the ardor of lovers of military adventure and the enemies of peace and security of nations. At the same time, it is the bearer of international ties and of strengthened friendship and cooperation with nations of other states. Each year our ships make dozens of visits and business calls to ports of many countries on all continents. And no matter where the Soviet navymen may be, they worthily represent their socialist Motherland everywhere.

Our Navy honorably performs its missions within the framework of the Warsaw Pact, the 25th anniversary of which was celebrated this year. Ties between fleets are constantly strengthened. There is a broad exchange of experience of combat and political training. Navies of Warsaw Pact countries stand vigilantly on guard over their sea borders.

Speaking in Warsaw on 15 May 1980 at a reception on occasion of a conference of the Political Consultative Committee of Warsaw Pact member nations, CPSU Central Committee General Secretary and Chairman of the Presidium of the USSR Supreme Soviet Comrade L. I. Brezhnev said: "Our alliance always was alien to aggressive aspirations. It never was aimed against the interests of any country or group of countries. It was formed to defend the peaceful labor of our peoples . . . for our joint struggle for the cause of a firm peace, and for respect for the sovereign rights of states and the freedom of nations. And it always performed its historical mission well and continues to do so."¹⁰

Our Motherland went through many ordeals under the leadership of the Communist Party. At each stage of its heroic past the Soviet Navy was together with the people in the glorious formation of the USSR Armed Forces. It augmented combat and revolutionary traditions in vigilantly guarding the homeland's sea borders. The Navy is obligated to the native Communist Party and the selfless work of the Soviet people for all its victories in battles against the enemies and for all its successes in peacetime.

FOOTNOTES

1. KRASNYY FLOT, 24 June 1939.
2. TsGA VMF [Central State Archives of the USSR Navy], stack 307, list 1, file 24, sheet 28.
3. "Sovetskaya Voenaya Entsiklopediya" [Soviet Military Encyclopedia], Voenizdat, 1976, I, 166.

4. "Istoriya Vtoroy mirovoy voyny 1939--1945" [History of World War II: 1939-1945], Vol. 3, Voenizdat, 1974, p 427; "Sovetskaya Voenaya Entsiklopediya," Vol. 2, Voenizdat, 1976, p 238.
5. VOYENNO-ISTORICHESKIY ZHURNAL, No 11, 1976, p 35.
6. S. G. Gorshkov, "Morskaya moshch' gosudarstva" [Sea Power of the State], Voenizdat, 1979, p 206.
7. L. I. Brezhnev, "Leninskim kursom" [With a Leninist Course], Vol. 1, Moscow, Politizdat, 1970, p 127.
8. KOMMUNIST, No 3, 1980, p 51; "Boyevoy put' Sovetskogo Voenno-Morskogo Flota" [Combat Path of the Soviet Navy], Voenizdat, 1974, p 483.
9. "Boyevoy put' Sovetskogo Voenno-Morskogo Flota," p 500.
10. PRAVDA, 16 May 1980.

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WARTIME OPERATIONS: COMMANDER PREPARATIONS FOR AN OFFENSIVE

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[Article, published under the heading "World War II and the Postwar Period," by HSU Arm Gen A. Luchinskiy, and Docent, Doctor of Historical Sciences Col R. Portugal'skiy: "On Work Methods of Army and Front Commanders during Preparation for Offensive Operations"; passages enclosed in slantlines printed in boldface]

[Text] Past war experience teaches that the course and outcome of operations depends to a considerable extent on the quality with which they are prepared. The most important elements of preparation are decisionmaking, planning of the operation, organization of coordination, preparation of troops to perform the combat mission, organization of fire destruction of the enemy, the conduct of party-political work, creation of the necessary troop groupings, preparation of a forming-up place for the attack and organization of all kinds of support and troop control. This article will examine issues involving the work methods of front and army commanders in decisionmaking, in planning offensive operations and in preparing staffs and troops.

/The decision for the operation/ was made by a commander in the war years after clarification of the mission and a situation estimate. It determined the concept of the operation, combat missions for troops, principles for organizing coordination, thorough support and control, and party-political work missions. In order to formulate the concept, this required first of all a clear understanding of the goal of operations, determination of the operational troop formation, a breakdown of the mission into the immediate and subsequent missions, and choice of the axis of main and other attacks.¹

War experience indicated that methods for working out a decision for an offensive varied. In a number of instances the front or army commander would make his decision after exchanging opinions with a limited number of people (chief of staff, military council members, artillery commander) or even on the basis of data known only to him. This often was preceded by his listening to detailed briefings on the situation, operational-tactical

calculations and suggestions by the chief of staff and chiefs of combat arms, special troops and services. Different approaches were explained chiefly by conditions of the situation, the commander's preparedness and his work style. Consideration was given to the need to preclude information leaks. For this reason the number of persons included in developing the concept for the operation and in its planning was limited.

The Headquarters, VGH [Supreme High Command] [Hq, SHC] demanded, for purposes of greater substantiation of decisions being made: "...A commander must make a preliminary decision from the map on the basis of a thorough study of the situation . . . and issue necessary instructions. Work out the decision on the terrain, then make the final decision and issue the operation order."² Terrain features, nature of enemy defenses, a precise outline of the forward edge, and the system of fire and obstacles were studied on the terrain. This made it possible to determine weak points in the enemy defenses, to update axes of the main and other attacks and the content of combat missions for subordinates, and to specify the plan for fire destruction of the enemy. Conditions for employing the combat arms and special troops for best use of their fire, attack and maneuver capabilities were evaluated at the same time. A most detailed determination was made here of the procedure for troop coordination in penetrating the tactical defensive zone. All aforementioned issues were worked out by the commanders at all levels, and often even by representatives of the Hq, SHC (in preparing the counteroffensive at Stalingrad, penetration of the Leningrad blockade and a number of other operations).

The origin of the practice of modeling upcoming actions occurred in the preparation of operations in the war years. In order to check individual parts of the decisions and coordinate troop efforts, front or army commanders would play out possible variants of combat actions on terrain models and maps. As a result there was a thorough consideration given to situation data and a quest for the best decision. Several variants sometimes were worked, such as the commitment of mobile groups and second echelons and formation of artillery preparation (the Belorussian, East Prussian, Berlin and other operations).

Let us trace the work procedures of commanders in decisionmaking in a few examples. In late May 1944 Arm Gen K. K. Rokossovskiy, commander of 1st Belorussian Front, summoned army commanders to a front military council session, announced the decision to them and assigned combat missions for conducting the Bobruysk Operation (24-29 June 1944). The 65th Army on the Parichi Axis had been in contact with the enemy for almost six months. Therefore its commander, Lt Gen P. I. Batov, and the staff headed by Maj Gen M. V. Bobkov knew the details of his defenses and grouping of forces and weapons. Even before receiving the combat mission, several war games and a command and staff exercise on offensive topics were held in the army with combined unit commanders, which allowed Gen Batov to understand the mission received and the army's role and place in the front operation and make the decision rapidly. He then assigned the chief of staff the mission of preparing necessary calculations and summaries and on the following day

he went out on ground reconnaissance together with the chief of staff, artillery commander and chief of engineer troops. Here he updated the axis of main attack, the penetration sector, troop locations in the forming-up place and the artillery firing positions. After hearing the summaries and suggestions of the chief of staff on returning to headquarters, the army commander updated his decision and reported it to the front.³

Work was accomplished in approximately the very same sequence in 28th Army.⁴ Concrete definition of the decision on the terrain was determined by the need for taking account of its most important features. The formation had to attack while negotiating forest-swamp sectors which were crossed by numerous tributaries of the Pripyat' River. Based on this, the army commander performed ground reconnaissance in the zone of each division of the first echelon together with chief of staff Maj Gen S. M. Rogachev and chief of the operations department Col K. T. Matveyev. They worked out in detail questions of employing rifle units, tanks, artillery and engineer subunits and organizing fire destruction of the enemy. It was then that instructions were issued on setting up special towers elevated to treetop level at observation posts of the army and combined units. Forming-up places for tanks were reconnoitered on the terrain.

The commander of 28th Army and commanders of its combined units worked somewhat differently in preparing for an offensive in April 1945. The problem was that after eliminating the enemy southeast of Koenigsberg, the army was placed in Hq, SHC reserve and on 18 April was transferred to the 1st Ukrainian Front for participation in the Berlin Operation. On the night of 20/21 April front commander Mar SU I. S. Konev issued instructions for its commitment. The army commander traveled to the line of commitment with an operations group. After performing a two-hour ground reconnaissance he made the decision for the attack and assigned the mission to Maj Gen P. F. Batitskiy, commander of 128th Rifle Corps, who had just arrived. Commanders of combined units and units made their decision from the map. Attack objectives, directions of attack and boundary lines were updated on the terrain.⁵

And so during the war years, depending on conditions of the situation, the front or army commander would make his decision from the map with subsequent clarification of individual questions during ground reconnaissance or only from the map. This always was preceded by clarification of the combat mission and a situation estimate by the commander personally. Careful attention was given to the calculation of forces and weapons and to setting up that grouping of troops which would correspond to the attack plan. Consideration here was given to the size and cohesiveness of the combined units, their outfitting with combat equipment, the personnel's moral and physical condition, organizational abilities and volitional qualities of command personnel and other factors. The decision would be documented immediately on the map. Combat documents would be worked up on its basis. As war experience indicated, the primary directions in improving the commander's work of decisionmaking were: a detailed analysis of all components of the situation and application of various methods of organizing combat actions

based on time periods set aside for preparing the offensive operation. A trend was noted towards maximum use of opportunities for working on the terrain.

/Planning of an operation/ consisted of a detailed elaboration of the content and sequence in performance of combat missions by the troops, allocation of troop efforts to axes of operation, and organization of coordination and thorough support and control of troops. It was done on the basis of the commander's decision and instructions of the superior staff based on operational-tactical calculations and foresight of the possible development of events. The commander directed the planning of operations in the war years. The staff performed a considerable part of the work, coordinating and directing the work of chiefs of combat arms, special troops and services, and organizing control over the quality and deadlines of performing assignments of making calculations, suggestions and various kinds of summaries.

The planning of a majority of front operations was done most often in the following sequence. Initially a plan would be drawn up, based on the requirement of the Hq, SHC (the Belorussian, Ostrogozhsk-Rossosh', penetration of the Leningrad blockade and other operations) or on the initiative of the front military council (Belgorod-Khar'kov, Crimean and other operations) in the form of proposals for the upcoming offensive, which was examined in the General Staff and briefed to the Hq, SHC. Subsequently, on receipt of an Hq, SHC directive for the offensive, the plan was given concrete definition. Some army operations on individual axes also were planned in this same sequence. But if they were a component of a front operation, then elaboration of the plan of attack at the army level usually began after receiving a front directive or a verbal order from the commander. The planning of a front or army offensive was characterized by its high degree of centralization, most often at the level of the Hq, SHC and front. This was a natural phenomenon for the war, for the missions being accomplished were those of a penetration of a deeply echeloned enemy defense, encirclement of his groupings, the delivery of heavy attacks, and support of the commitment of mobile groups, which required coordinated actions of several formations and combined units of branches of the Armed Forces and combat arms, and of SHC forces and weapons. This approach permitted the massing of means of fire destruction (aircraft and artillery) and the reserves, and it also permitted most effective accomplishment of camouflage measures.

Plans for front offensive operations usually were worked out to the entire depth by missions and axes of upcoming actions. In generalizing the experience of planning in the summer-fall campaign of 1941, the Hq, SHC noted as a deficiency that the plans for front operations often did not indicate time periods for accomplishing combat missions. This led to a reduction in responsibility of commanders and staffs and made it more difficult to organize coordination, especially with aircraft. In addition, control entities were deprived of an opportunity to exercise supervision over the course of combat actions. The practice of defining missions for

armies for 3-4 or more days also was condemned. A directive of the chief of the General Staff dated 13 December 1941 demanded that "missions on a front scale be assigned to armies for a period not exceeding three days and, in assigning the immediate mission, establish a line each day which an army's combined units must reach by day's end."

The commanders and staffs of combined-arms armies usually planned an offensive by phases. The first phase was penetration of the enemy's tactical defensive zone (1-2 days), the second phase was development of the offensive and defeat of operational reserves (2-3 days), and the third phase was the pursuit and consolidation of lines (5-8 days). Quite often a regrouping of troops and occupation of a forming-up place was included in the first phase. The first day of an operation often was made a separate phase and planned with a greater degree of detailing. In a number of instances (the Belorussian, Vistula-Oder and Berlin operations), tank armies would work out two or three variants for commitment of combined units from different axes or from several lines on one axis depending on results of penetration of enemy defenses by combined-arms armies, based on instructions of the front commander. Consequently, the procedure for troop coordination and support of their commitment under various conditions of the situation was thought out ahead of time.

The planning of combat actions was conducted most often consecutively in front and then in army staffs and combined units. But in a number of instances it was organized almost in a parallel manner at several echelons. This was most typical of the first period of the war (the counteroffensive at Tikhvin, Rostov and Moscow), when a limited amount of time (1-2 days) was given for preparing operations for tank armies, which often were committed from the move (3d Guards Tank Army and 4th Tank Army in the Orel Operation) under a variant not previously envisaged. The parallel planning method was inherent both to operational and tactical echelons during assumption of a defense in the course of an offensive and with a sudden change of combat missions.

An analysis of the preparation of operations such as the Orel, Belgorod-Khar'kov, Vistula-Oder, East Prussian, Berlin and Prague operations permits the conclusion that the quality of work performed by the commanders and staffs in planning the offensive in the war years improved through a capable combination of various methods for accomplishing the mission. A trend is noticeable here toward an increase in the degree of parallel work at various command and staff echelons. During 65-70 percent of the time in 1943 and 85-90 percent of the time in 1945 entities of field directorates of tank armies accomplished planning in parallel with the work of corps directorates, and this occurred for 50-80 percent of the time in the army, corps and brigades. A high degree of parallelism can be traced in combined-arms armies, such as in the commitment of 28th Army in the Berlin operation. It must be emphasized that steadfast fulfillment of calendar plans for preparing operations as well as operations and reconnaissance orientations held ahead of time were of substantial assistance here.

One should bear in mind the fact that the quality and timeliness of resolving the tasks of planning operations depended to a considerable extent on the work style of commanders. For example, here is how K. K. Rokossovskiy described the work of preparing an operation: "We had a headquarters office, as we called it, where we got together to ponder plans, make decisions, hear information from officers responsible for sectors, discuss all possible suggestions, and exchange opinions on employment of various combat arms and on organizing coordination among them."⁹ In P. I. Batov's opinion, this style created "a surprisingly pleasant working atmosphere, and each one wished to think more boldly and act more vigorously."¹⁰ K. P. Telegin (member of front military council) remarked in recalling preparations for the Belorussian Operation: "Members of the military council spent several days and nights together and separately in the operations department of front headquarters. Together with commanders of combat arms and chiefs of directorates they would think, calculate, update, express doubts and fears, make suggestions, and consult with army commanders and the commanders of tank corps."¹¹ The commanders' thorough understanding of the missions, their efficiency, trust in those around them, as well as their sociability and tact guaranteed the success of collective labor to no small extent. Eyewitnesses recall how productive organizational work was in the period of planning upcoming operations by G. K. Zhukov, I. S. Konev, R. Ya. Malinovskiy, K. A. Meretskov, I. Ye. Petrov and many other front commanders as well as the greater part of army commanders. Authors of foreign works also are forced to admit this.¹²

The operations part of the operation plan contained, graphically on a map and in an explanatory note (legend), an estimate of the enemy, purpose of the upcoming offensive, forces and weapons being used, concept of the operation and combat missions for the troops, a determination of the principles of coordination and the organization of control and support of combat operations. Questions of the use of combined units and units of branches of the Armed Forces, combat arms (special troops), and partisan formations as well as operational and logistical support and party-political work were reflected in detail in specially prepared documents (special plans for employment of combat arms), which were a component of the operation plan.

/The preparation of staffs and troops/ for performance of combat missions during the war included a complex of measures to fill out the combined units with personnel, weapons and equipment, to bring supply stocks up to established norms, to organize combat training for the troops, and to improve the generals' and officers' knowledge and skills in controlling forces and weapons being used for the offensive.

During the war command and staff exercises, map war games, demonstration problems, courses, staff practices and short tactical training problems became the primary form for preparing front or army staffs. The greater part of problems with generals and officers were conducted by the commanders personally. In late December 1944 the front commander conducted a three-day map war game in the headquarters of the 1st Belorussian Front

during preparations for the Vistula-Oder Operation (12 December-3 February 1945). Army commanders, artillery commanders and chiefs of staff of armies and corps commanders took part in this in addition to the front command element. The offensive operation was worked out. On the first day army commanders briefed the concept of the operation, procedures for employing forces and weapons and procedures for organizing coordination with tank armies, and the plan for the artillery offensive. On the second day a penetration of a static defense with subsequent exploitation of success was played through from narrative problems and on the third day questions of organizing command and control were worked out.

A number of features were noted in preparing troops for an operation. This matter was most difficult to resolve in the first period of the war, when replacements would arrive at the front after two or three weeks of training in the rear. Up to 60 percent of the replacements consisted of officers called up from the reserve. Gen K. A. Meretskov remarked that "the bitter experience . . . in November 1941 taught many of us a lesson. It was then that we set for ourselves the rule: No matter how great the need for troops, the incoming replacements and newly arriving units were sent through training centers before battles or familiarized directly in the combined units with the features of conducting combat operations.."¹²

And so as early as the fall of 1941 every opportunity was used for increasing the soldiers' combat and moral qualities. Problems would be organized before operations. They were held for three days in the 37th Army of the Southern Front in preparing for a counteroffensive (November 1941), and for two days for 10-12 hours each in 54th Army of the Leningrad Front (November 1941). Primary emphasis in the training was placed on practicing problems of moving up and deploying into combat formation, attacking the forward edge, and fighting for strongpoints. In addition, 52d Army (prior to the counteroffensive at Tikhvin) made it the practice to drive tanks over personnel and have the personnel conduct volley fire against aircraft.

Directing attention to the need for preparing troops for the counteroffensive at Moscow, A. M. Vasilevskiy, in discussions with Col Gen I. S. Konev, commander of the Kalinin Front, emphasized the demand of the Supreme Commander "to make it possible for the untested combined units of Maslennikov (29th Army--Ed.) to assimilate the front situation if only for two days."¹³ On the basis of these instructions practical problems were held in the armies for a study of weapons hardware, equipment operation under winter conditions, firing and grenade throwing. Companies held day and night tactical exercises and a number of subunits fired antitank rifles against captured tanks. Divisions of the 1st Shock Army and 16th Army of the Western Front arranged demonstration problems for platoon, company and battalion commanders on control of subunits in battle, and for personnel on their actions in attacking the forward edge of enemy defenses.¹⁴ By the fall of 1942 troop combat training acquired a more planned and purposeful character. As a rule, the front commander would define the objective, missions, time, procedures and sequence in organizing combat training. The

staff and directorates (departments) would plan the subject matter, pass on the commander's instructions and exercise supervision over their accomplishment. Front and army military councils always attempted to organize troop training in strict conformity with the character and specific features of upcoming actions, setting aside the maximum possible time for it.

Many other examples in organizing the scheduled preparation of troops for combat operations also are of practical interest. For example, prior to the Belorussian Operation the staffs of armies of the 1st Baltic Front planned training for 20 days (from 1 through 20 June). Units and subunits on defense were placed in the second echelon and trained under a five-day program, while those completing a redeployment were trained for ten days in assembly areas. At that time the armies held two or three day courses for commanders and chiefs of staff of divisions and regiments, the corps did the same for tactical and artillery battalion commanders, and the division did so for company and battery commanders. Command and staff exercises were organized within the command training system. Specialist training was accomplished in courses in units.¹⁵ Gen A. P. Beloborodov, former commander of 43d Army, later emphasized that officers of the field directorate were sent to each division from the army to assist troops in preparing for the operation. Exercises were conducted with the staffs of rifle corps, divisions and regiments, during which there was a search for forms of coordination which best met the conditions of combat in forest-swamp terrain. . . . Exercises would end with a demonstration of practical actions by the subunits.¹⁶

The 1st Ukrainian Front accomplished tasks of preparing troops uniquely in the summer of 1944 in training replacements for the L'vov-Sandomierz Operation. From 60 to 90 percent of the personnel were called into rifle combined units from territory liberated from the enemy. These people previously had not served in the Soviet Army and for a long while had experienced the noxious effects of fascist and bourgeois-nationalist propaganda. It was required, on the one hand, to organize the most intensive combat training (12-14 hours each were set aside for classes) and, on the other hand, to organize skilled political indoctrination work. The study of information booklets and operational newsheets contributed to the personnel's heightened combat proficiency. They told in a popular form about combat capabilities of the primary weapons and explained provisions of combat regulations. Units held a demonstration of weapons and their capabilities for the newly arrived replacements

The following can be noted in conclusion. Front and army commanders employed the most diverse methods for making decisions and planning operations, determined by the situation and chiefly by the availability of time as well as the possible character of an operation. Certain features were manifested in their activities: There was a continuous increase in the amount of time spent on organizational activities in subordinate staffs and troop units, primarily for resolving a complex of tasks in estimating the

terrain and the enemy, coordinating troop efforts, assigning combat missions and preparing troops and staffs. Work on the terrain for the purpose of concrete detailing of the decision began to be done at all command echelons, and not only at the tactical level. Its improvement followed the path of moving away from the practice of having the senior commander issue instructions to playing out variants of possible actions by the sides. In managing the troops, commanders relied to an ever greater extent on the staff and other control entities. Collective reason contributed to the substantiated planning of the employment of forces and weapons and the fullest use of their potential combat capabilities.

As war experience demonstrated, the ability to manage is not an innate quality. It stands to reason that a person's inclinations and abilities also are of no small importance, but they develop successfully only when people persistently master Leninist science and the art of management. A thorough and comprehensive study of Marxist-Leninist theory by military cadres and developing communist ideology and conviction in them is the chief condition for developing and improving a truly scientific style in their work of command and control. A systematic increase in their military and specialized knowledge and an improvement in the abilities and skills of managing subordinates and the military-pedagogic proficiency of officers and generals is of great importance here even at the present time. The system of operational and combat training must accustom people to think dialectically and make substantiated decisions.

War experience revealed the need for high-quality resolution of the tasks of preparing troops and staffs for upcoming combat actions by confirming the determining role of commanders in organizing combat training of officers, generals, staffs and troop personnel. When considerable time was available they conducted practice sessions, tactical drill problems, demonstration classes, troop exercises, command and staff exercises, and courses for commanders and specialists of the combat arms. When time was limited they arranged presentations by experienced soldiers to newly arrived replacements, published instruction booklets and pamphlets, and conducted demonstration problems and exercises and critiques of them. The practice of training staffs and troops in what was needed in combat under near-combat conditions acquired special importance.

The high effect of work performed in the war years to resolve problems noted in the article provides the basis to conclude the expediency of an extensive study of the experience accumulated for its use in the practice of preparing command cadres under present-day conditions.

FOOTNOTES

1. "Polevoy ustav Krasnoy Armii" [Red Army Field Manual], Voenizdat, 1943, pp 39-40.

2. TsAMO SSSR [USSR Ministry of Defense Central Archives], stack 208, list 2511, file 1143, sheet 93.
3. Ibid., stack 233, list 2356, file 1, sheet 58.
4. The commander was Lt Gen A. A. Luchinskiy--Ed.
5. TsAMO, stack 382, list 2465, file 293, sheets 3-5.
6. Ibid., stack 48, list 1554, file 92, sheet 171.
7. "Obshchevovoyakovaya armiya v nastuplenii" [The Combined-Arms Army in the Offensive], Voenizdat, 1966, pp 42-45.
8. K. K. Rokossovskiy, "Soldatskiy dolg" [A Soldier's Duty], Voenizdat, 1968, p 305.
9. VOYENNO-ISTORICHESKIY ZHURNAL, No 12, 1976, p 72.
10. "Osvobozhdeniye belorussii 1944" [The Liberation of Belorussia in 1944], Moscow, "Nauka," 1970, p 240.
11. F. Von Mellenthin, "Panzer Battles: 1935-1945," translated from the German, Moscow, 1957, p 24; B. Liddell Hart, "History of the Second World War," translated from the English, Moscow, 1976, pp 460, 467 and so on; A. Wykes, "1942: The Turning Point," London, 1972, p 164; M. Caidin, "The Tigers are Burning," New York, 1974, pp 97-98, 108.
12. K. A. Meretskov, "Na sluzhbe narodu" [Serving the People], Moscow, Politizdat, 1969, p 237.
13. TsAMO, stack 213, list 2003, file 21, sheet 76.
14. Ibid., stack 220, list 451, file 96, sheets 134-141.
15. Ibid., stack 364, list 72568, file 1, sheets 170-172; stack 241, list 2656, file 52, sheet 40.
16. "Osvobozhdeniye belorussii 1944," p 309.

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WARTIME OPERATIONS: THE STRUGGLE FOR AIR SUPREMACY

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[Article, published under the heading "World War II and the Postwar Period," by Professor and Doctor of Historical Sciences Maj Gen Avn I. Timokhovich: "The Character and Methods of the Struggle for Air Supremacy"; passages enclosed in slantlines printed in boldface]

[Text] The origin of the problem of winning air supremacy dates back to World War I times. But at that time the struggle in the air sphere was of small scope and was not particularly acute. The chief goal was to prevent aerial scouts and artillery spotters from performing their assigned missions. The fight against enemy aircraft was accomplished primarily over the battlefield, was of a short-lived (periodical) character and had tactical and, more rarely, operational significance. Almost the sole method of combating enemy aircraft was to destroy the aircraft in single aerial combat. It was a rare practice to attack airfields.

With the increase in combat capabilities of aviation after World War I, air forces began to accomplish not only tactical missions, but operational-strategic missions as well. There also was a change in the goals and character of struggle for air supremacy, which acquired primary importance and was one of the deciding conditions of victory in operations and in the war as a whole. The struggle for air supremacy now was being accomplished at the strategic, operational and tactical levels and was not limited merely to destroying aircraft in the air space. To this end the command element of warring sides began to carry out full-scale measures. In addition to the defeat of air groupings concentrated in a TVD [theater of military operations] and on individual strategic axes, operations were employed to destroy the aviation industry, to disable or capture sources of petroleum and synthetic fuels plants, to destroy training centers for flight and technical cadres, to eliminate stores of aviation fuel, ammunition and equipment, to neutralize air force control posts and so on.

It is true that during World War II not one of the states yet possessed those weapons and in such numbers as to destroy all components of the

enemy's air might simultaneously and to an identical degree. By virtue of these reasons the warring sides attempted to find the most vulnerable links in the overall system of the enemy air force, destruction of which would have a favorable effect on the air situation and would lead in the shortest manner to the ultimate objective of winning air supremacy.

Studies indicate that in the struggle for air supremacy enemy aviation groupings were the primary objective of the warring sides' pressure in all TVD's of the past war. That was the case at the Soviet-German and West European fronts, in the Pacific TVD and in Southeast Asia, and in North Africa and the Mediterranean basin. And this is not by chance. Their defeat immediately produced tangible results: There was a rapid improvement in the air situation in a specific region.

The struggle for air supremacy basically was waged by two methods: the destruction of enemy aircraft in aerial battles and engagements and the destruction of aircraft on airfields. The other methods (knocking out enterprises of the aviation industry, destruction of fuel sources and stockpiles, pressure on training centers for flight and technical cadres, and destruction of air force control posts and aviation equipment depots) played a rather important role as well. The struggle for air supremacy in a TVD was carried on both during daily combat operations and within the framework of special air operations.¹

The leading place in land TVD's belonged to /air battles and engagements./ For example, at the Soviet-German front 44,000 of the 57,000 enemy aircraft disabled by our aviation were shot down in aerial battles and engagements.² Such great attention given to air battles and engagements was a natural phenomenon. The use of this method of the struggle for air supremacy achieved a most substantial reduction in the combat might of enemy aviation. As a rule, the aircraft crews perished or were disabled in aerial battles together with the downed aircraft and the training of flight personnel required much time and the expenditure of enormous supplies. And if the belligerent did not have a reserve of aviation cadres and its flight schools did not manage to train crews with the requisite qualifications, then its aviation gradually lost combat effectiveness. According to the admission of the German authors of the book entitled "World War 1939-1945," published in West Germany, the losses of flight personnel of fascist German aviation from June 1941 through December 1943 comprised some 50,000.³ The size of flight cadres of the German Luftwaffe in the first three war years was reduced from 45,000 to 21,000, i.e., by more than half.⁴ It was the shortage of flight personnel that was one of the chief reasons for the loss of strategic air supremacy at the Soviet-German front by fascist German aviation in the summer of 1943.

The large proportion of aerial battles and engagements was explained by the belligerents' use of large masses of aircraft. The opposing forces attempted on the one hand to perform their missions successfully and do maximum damage to the enemy, and on the other hand, to prevent enemy air force strikes against their own installations. All this led to an intense struggle in the air.

Fighters were the chief means for destroying aircraft in aerial battles and engagements. They fought enemy aircraft while screening friendly troops, naval forces and rear installations and while supporting the combat operations of bombers and ground attack aircraft. It took an average of 30 sorties by Soviet fighters for each German aircraft destroyed in the air.

Experience indicates that the fiercest air battles occurred on the axis of main attacks of ground forces during the most important phases of operations (in penetrating defenses, the commitment of tank armies and corps, repulsing counterblows and so on). As a rule, the area of intensive aerial battles was limited to the battlefield and the immediate operational depth. Air battles often developed into protracted air engagements in which several hundred aircraft participated simultaneously on both sides. They would arise most often during the screening of main groupings of ground forces and naval forces against attacks by enemy aircraft during the conduct of major operations (the defense of Stalingrad in 1942, the battle in the Kuban' in 1943), when delivering mass attacks during air operations (the Battle of Kursk in 1943), and in repulsing mass raids by enemy aircraft against administrative-political and economic centers (Moscow, Leningrad, Kursk).

Many air engagements arose spontaneously and had no planned basis. Elements of planning air engagements appeared for the first time in the system of air defense of major installations (Moscow, Leningrad). Plans for screening outlined different variants for initiating the engagements (depending on the directions of a raid, the number of enemy bombers, echelonment of their attack groupings, weather conditions and other factors), defined the procedure for building up fighter forces in the air, envisaged coordination both among units and combined units of fighters and with AAA, and reflected questions of vectoring against air targets. Air engagements assumed a more organized character in 1943-1945 (in the Kuban' and at Kursk and Berlin).

Intensive air engagements also occurred at the Western Front of World War II. For example, in the battle for England in 1940 fascist German aviation flew up to 1,786 sorties per day for strikes against enemy airfields and other installations. In waging fierce engagements in the air, British fighters flew up to a little more than 900 sorties. From 13 August through 31 October 1940 the losses of the German Luftwaffe comprised 1,103 aircraft, and those of the British--642 fighters.⁵

The effectiveness of the method of destroying enemy aircraft in the air rose thanks to an improvement in fighter operations. Fighter tactics developed in the following directions: a shift from single to group air battles; echelonment of combat formations by altitude, depth and frontage; specialization of fighter combined units and units for performing specific missions (screening troops and installations and supporting combat operations of other air arms); extensive use of radios and technical systems for controlling fighters and so on.

World War II experience convincingly showed that the success of combating enemy aircraft in the air depended on many factors. Primary importance among these factors lay with the moral-combat and psychological qualities of flight personnel, combat features of aviation equipment, precision in functioning of the VNOS (aerial surveillance, warning and communications) system, combat readiness of fighter aviation, mobility in control of fighter forces, organization of coordination of all forces and weapons participating in repulsing enemy air raids, and the combat experience and organizational abilities of command personnel.

Another method of the struggle for air supremacy--destruction of aircraft on airfields/--occupied a lesser proportion in comparison with air battles and engagements. But strikes against airfields played a predominant role in some periods. This method was used especially widely by the aggressor states--fascist Germany and militarist Japan--at the beginning of the war. The mass attacks by the German Luftwaffe against airfields in Poland, Holland, Belgium, France and the USSR, and by the Japanese Air Force against U.S. air bases assumed the form of air operations to defeat enemy aviation. For example, in the attack on Poland on 1 September 1939 the fascist German aviation used major forces to subject 22 airfields to simultaneous surprise mass attack, destroying up to 20 percent of Polish aviation. On the following days German bombers continued to operate intensively against airfields. Having inflicted a serious defeat on the Polish Air Force, fascist German aviation seized total air supremacy in a few days and retained it until the end of the military campaign against Poland.

The German Luftwaffe operated by a similar method when the Hitlerites invaded Belgium, Holland and France. On 10 May 1940 over 3,000 German aircraft made a surprise attack on 72 airfields and knocked out several hundred enemy aircraft. Continuing to build up the strikes against airfields, which were combined with air battles and engagements, the Hitlerite aviation quickly defeated the enemy air force and won undivided air supremacy.

With the beginning of war against the USSR, enemy aviation (more than 2,000 aircraft) made surprise mass raids against 66 airfields of our western military districts on 22 June 1941, which comprised 65 percent of the total number of airfields in the border zone. On the first day of military operations the German Luftwaffe managed to destroy 1,200 Soviet aircraft, including 800 on the ground.⁶

Japanese aviation also operated effectively against airfields. In the attack on the U.S. naval base at Pearl Harbor and airfields in the Hawaiian Islands on 7 December 1941, 414 Japanese carrier-based aircraft destroyed 272 of the 387 American warplanes present. On 8 and 9 December 1941 Japanese pilots disabled half of the American heavy bombers and more than a third of the fighters at air bases in the Philippines. In two days they succeeded in destroying a third of the British aircraft on airfields on the Malacca Peninsula. All this contributed to winning air supremacy for Japanese aviation in the Pacific basin.

As we see, the basic method of the struggle for air supremacy by aggressive states in the initial stages of military operations in all TVD's consisted of mass attacks against airfields, which in combination with the suddenness of the attack led to a defeat of the enemy's main aviation forces. It should be pointed out, however, that the high results of operations against airfields were explained not only and not so much by combat experience and surprise in the attack by fascist German and Japanese aviation as by the unpreparedness of air forces and air defense troops of countries subjected to aggression to repulse surprise mass air strikes, by the crowded basing of aircraft, the poor camouflage of airfields and aircraft hardstands there, a late maneuver to alternate airfields, and the absence of a centralized system of control of the air force and air defense forces.

During World War II the proportion of strikes against airfields dropped. Air battles and engagements acquired the deciding role in the struggle for air supremacy. This was the result of a number of factors. /First of all,/ by the dispersal of aircraft, an increase in vigilance and combat readiness of the air force, a reinforcement of airfield air defense, and an improvement in the VNOS system, which made it difficult to achieve surprise and reducing the effectiveness of operations against basing areas of aircraft. /Secondly,/ by the difficulty of organizing strikes against airfields. To ensure their high effectiveness, it was necessary to carry out a large complex of preparatory activities (thorough reconnaissance and final reconnaissance of airfields, organization of close coordination among groups of aircraft, suppression of air defense weapons along the route and in the target area, and so on), for which there was not always enough time, forces or weapons. But the slightest omission of any of these matters meant that combat operations against airfields proved ineffective and were accompanied by heavy losses of friendly aircraft. /Thirdly,/ by the need to use major forces of aircraft for supporting ground forces and naval forces in operations. For example, Soviet aviation used a little more than two percent of the sorties flown during the Great Patriotic War to destroy enemy air forces on airfields. But this did not at all mean that this method of the struggle for air supremacy was ineffective and had lost its importance. To the contrary, during airfield strikes Soviet pilots knocked out 13,000 enemy aircraft, which comprised some 23 percent of the total number of enemy aircraft destroyed at the Soviet-German front. An average of five sorties were spent for each enemy aircraft disabled on the ground, i.e., 5-6 times less than in air battles.¹⁰ In addition, during the strikes against airfields a portion of the flight and technical personnel was injured, runways often were demolished, fuel and ammunition dumps and stores of aviation-technical equipment near airfields were destroyed and aircraft control points would be disabled.

If the situation required it, airfield strikes at times played a predominant role in the destruction of enemy aircraft. This was observed most often during periods of operational and strategic pauses and prior to preparations for major strategic operations, when aviation forces were at a low level of activity in accomplishing missions of supporting ground forces and naval forces. The employment of major aviation forces for operations

against airfields, which often were organized in the form of special air operations, produced considerable effect. For example, six air armies participated in an air operation accomplished from 6 through 8 May 1943 (before the Battle of Kursk). Air combined units delivered four mass strikes against airfields across a front of 1200 km and to a depth up to 200 km. There were 501 enemy aircraft destroyed as a result.¹¹ A month later, from 8 through 10 June 1943, the Soviet Air Force conducted a second air operation to defeat enemy aviation. This time 249 German aircraft were put out of action.¹² During the two air operations our pilots destroyed a sum total of 7,500 enemy aircraft on airfields and in air battles, which contributed to our aviation winning strategic air supremacy in the summer of 1943.

Experience indicates that the success of strikes against airfields depended on the composition of aviation forces, thorough reconnaissance and final reconnaissance of the objectives of operations, the choice of tactics, attainment of surprise, the degree of suppression of air defense weapons in the target area and other factors. This method of struggle acquired special importance in TVD's and on strategic axes with a poorly developed network of airfields. In such cases the destruction of enemy aircraft and, more important, disabling of airfields had a rapid effect on the air situation. It was not by chance that in operations conducted on territory having a limited airfield network (such as in mountain regions) strikes against airfields had a greater proportion (15-25 percent of all sorties flown in the struggle for air supremacy). For example, that was the case in the Belgrade Operation.

Airborne and amphibious landings were used in individual instances to capture enemy airfields. For example, during the West European campaign of 1940 fascist German parachutists seized a portion of airfields in Belgium and Holland, which then were used by Hitlerite aviation. Japanese amphibious landing forces successfully accomplished this mission in the Pacific TVD, and Soviet airborne forces did the same in the Manchurian Operation. Partisan combined units and units often were employed to capture airfields in the deep enemy rear (the Belorussian Operation). Many examples also can be given where enemy airfields would be seized by tank combined units (raiding groups) which penetrated deeply into the enemy rear. That was the case in the counteroffensive at Stalingrad and in the Vistula-Oder, Berlin and other operations. Capture of airfields narrowed the enemy's opportunities to organize the basing of aircraft and it was often accompanied by the destruction of enemy aircraft, which could not help but have an effect on the course of struggle for air supremacy.

The chief method of the struggle for air supremacy in sea and ocean TVD's was the destruction of aircraft carriers and aircraft at coastal airfields. The example of the Battle of Midway in June 1942 indicates the effectiveness of strikes against carriers. This decisive battle in the war in the Pacific was typical in the fact that carrier-based aircraft played the chief role in it. During the battle the Americans succeeded in destroying four large carriers and 332 aircraft, while they themselves lost one

carrier and 150 aircraft.¹³ Having suffered a heavy loss in carriers, the Japanese lost air supremacy and were forced to give up the plan to capture the island.

The great importance of carriers as floating airfields and, on the other hand, their vulnerability from the air forced the command elements of the warring sides to continuously reinforce the air defense of carrier forces with fighter aircraft and air defense weapons. This is why the operations of carrier forces usually were accompanied by fierce air battles and engagements.

Not only fighters, but also ground-based air defense weapons (AA guns, machineguns and so on) were effective means in the struggle against enemy aircraft in the air in all TVD's. An analysis of aircraft losses in the Great Patriotic War indicates that approximately one-fourth of all aircraft of the belligerents destroyed was at the hands of air defense weapons. In individual operations of 1943-1944 (the Orel, Belorussian and others), where proper attention was not given to the struggle against ground-based air defense weapons and where pilots scorned evasive action, losses of aircraft rose considerably. Thus, the experience indicates with all obviousness that without suppressing air defense weapons, including ground-based weapons, it is impossible to provide for freedom of actions of aviation during an operation and successfully perform the assigned missions.

We already have noted that in World War II operations were conducted /against installations of the aviation industry/ and sources of fuel production. For example, the Luftwaffe of fascist Germany made raids against aviation enterprises of England in 1940-1941, and bombers of England and the United States delivered strikes against plants of the aviation industry, oil refineries and synthetic fuel enterprises of Germany and its allies in 1941-1945. But these operations did not provide the desired effect, although bourgeois falsifiers of history exalt them in every possible way. For example, the American military writer Brophy wrote that "as a result of these raids the production of fuel and important lubricants almost ceased and the Nazi Air Force was in fact destroyed."¹⁷

But the facts indicate the contrary. /First of all,/ prior to 1944 U.S. and British bombers operated very little against installations of Germany's aviation industry. The weight of bombs dropped by Anglo-American aviation on Germany's aviation plants consisted of no more than two percent of the overall tonnage. /Secondly,/ targets for destruction were poorly chosen. British and U.S. bombers preferred to operate against area targets--cities--and closed their eyes to the most vulnerable spots in the industrial production of aircraft and other aviation equipment. It is therefore no accident that the production of aircraft in Germany did not drop but, to the contrary, rose from year to year. While in 1942 German industry produced 15,409 warplanes, in 1943 it was 24,807 and in 1944--40,593 aircraft.¹⁸

/The production of aviation fuel/ was a very weak spot in the German Luftwaffe system. Germany did not have its own oil refineries. It satisfied

the need for aviation fuel chiefly through petroleum coming from Romania and synthetic gasoline manufactured at seven of its own plants. And although installations of the oil refining industry and synthetic fuel plants were very vulnerable from the air, up to the summer of 1944 they were subjected to weak pressure on the part of Anglo-American aviation. According to well-known British bourgeois historian B. Liddell Hart, only 14 percent of the bombs were dropped on oil refineries by the U.S. and British air forces. This is explained by a clear lack of desire on the part of reactionary circles in the West to prematurely weaken the might of fascist German aviation, the overwhelming majority of which were at the Soviet-German front. Liddell Hart writes that "as a result of the lengthy inviolability of Romania's remote oil refineries and an increase in plants for the production of synthetic fuel, Germany's stockpiles in May 1944 reached a maximum and only in subsequent months did they begin to drop."¹⁹ This drop was caused above all by stepped-up strikes of Soviet aviation in the summer of 1944 against Romania's oil refineries and its subsequent departure from the war on the side of fascist Germany. Along with this, strikes against synthetic fuel enterprises on the part of the U.S. and British air forces increased after the landing of Anglo-American troops in Normandy in the summer of 1944 for the purpose of securing from the air and supporting a more rapid advance of their ground forces, and this immediately produced results. By virtue of the aforementioned reasons, the production of aviation gasoline in Germany in September 1944 dropped to 10,000 tons, while the monthly requirement was 160,000 tons. From the fall of 1944 the Hitler command was forced to cease training flights almost completely, cut back combat sorties and limit the employment of new jet fighters, which expended a large amount of kerosene, because of the shortage of aviation fuel.²⁰

As we see, the Anglo-American command did not wish to conduct a vigorous struggle to undermine the enemy's air might. They did not take full advantage of the enemy's weaknesses. As a result, the struggle for air supremacy in the West European TVD bore a "languid" character and was crowned with success only at the war's end. The combat effectiveness of the German Luftwaffe was undermined not so much by the strikes of Anglo-American aviation against enterprises of the aviation industry and aviation fuel plants as by the destruction of air groupings at the Soviet-German front.

With regard to the Soviet Air Force, it also operated little against installations of the aviation industry and enemy oil refineries. This was explained by the remoteness of these installations and, consequently, their inaccessibility right up to 1944 for our bomber aviation, which had a limited radius of action, a low bomb load, lack of reliable instruments for precise night bombing and lack of fighters with a large radius of action for long-range escort of the bombers during the day. Throughout the war the headquarters of the VVK [Supreme High Command] [Hq, SHC] was forced to employ long-range bomber aviation (ADD) chiefly to accomplish missions in operations of the ground forces.

It is true that at the beginning of the Great Patriotic War (from 26 June through 8 July 1941), pilots of the 4th Long-Range Bomber Corps and the Black Sea Fleet Air Force delivered a number of telling blows against Romania's oil fields. As a result, some oil refineries were disabled, stores of petroleum products were burned and many oil rigs demolished. Unfortunately, operations against the Ploesti oil fields and the oil refineries of Constanta were not continued in 1941, since the DBA (long-range bomber aviation) had to be employed for supporting ground forces, thus compensating for heavy losses in front aviation. They were renewed only in 1944, when the Soviet Army approached the borders of Romania.

/Other methods of the struggle for air supremacy/--destruction of training centers for flight-technical personnel, destruction of radars, aviation control posts and depots of air force combat materiel and supplies--were employed even more rarely. It is true that the destruction of fuel and ammunition dumps, command posts and radiotechnical control gear near airfields and the disabling of runways was partially achieved during the destruction of enemy aircraft at airfields. Special operations to destroy enemy radars were the practice during the preparation of some major operations. For example, that was the case not long before the beginning of the Normandy Landing Operation. Anglo-American aviation delivered mass attacks against German radars located in Northern France, and disabled almost all of them.⁷¹

And so, an analysis has shown that the scope of the struggle for air supremacy rose continuously and the number of forces and weapons used to accomplish this purpose increased with the quantitative and qualitative development of means of air attack.

The arsenal of methods of the struggle for air supremacy expanded as the means of air attack developed. While the struggle in the air sphere had a tactical scale in World War I and was limited to one or two methods, in World War II it acquired operational-strategic significance and was conducted by the integrated use of many methods. Experience teaches that stereotypes are inadmissible in the selection of these methods. Under different conditions of the situation (in different TVD's, in particular periods of a war, against different enemies), one and the same method produced dissimilar results. It follows that the selection of methods of the struggle for air supremacy must be determined by a detailed analysis of the condition of the enemy's economy and all factors of the operational-strategic situation. It is apparent from practice of the past war that greatest results were achieved when this mission was accomplished through joint efforts of all branches of the armed forces with consideration of the strong and weak sides of fascist Germany and the most vulnerable places in the system of its air power.

FOOTNOTES

1. This article does not examine the forms of struggle for air supremacy.
2. TsAMO [Ministry of Defense Central Archives], stack 35, list 22614, file 8, sheet 165.
3. "World War 1939-1945: Collection of Articles," translated from the German, Moscow, Izd-vo inostrannoy literatury, 1957, p 515.
4. "Istoriya Velikoy Otechestvennoy voyny Sovetskogo Soyuz 1941--1945 gg." [History of the Great Patriotic War of the Soviet Union: 1941-1945], Vol. 3, Voenizdat, 1961, p 404.
5. VOYENNO-ISTORICHESKIY ZHURNAL, No 2, 1967, pp 29, 33.
6. "Istoriya Velikoy Otechestvennoy voyny Sovetskogo Soyuz 1941--1945 gg.," Vol. 2, Voenizdat, 1961, p 16.
10. VOYENNO-ISTORICHESKIY ZHURNAL, No 9, 1976, pp 27-28.
11. TsAMO, stack 35, list 266133, file 1, sheets 68-69.
12. Ibid., sheets 333-334.
13. "Sovetskaya Voenennaya Entsiklopediya" [Soviet Military Encyclopedia], Vol. 5, Voenizdat, 1978, p 277.
17. A. Brophy, "The U.S. Air Force," translated from the English, Voenizdat, 1957, pp 71-72.
18. "World War 1939-1945," p 514.
19. B. Liddell Hart, "The Second World War," translated from the English, Voenizdat, 1976, p 572.
20. Ibid., pp 572, 573.
21. D. Richards and H. Saunders, "The British Air Force in World War II 1939-1945," translated from the English, Voenizdat, 1963, pp 507-508.

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COMMUNICATIONS SYSTEMS: ACHIEVING OPERATIONAL STABILITY

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[Article, published under the heading "World War II and the Postwar Period," by Docent and Candidate of Military Sciences Col I. Taran: "Methods of Achieving Stability of Communications Systems in an Operation (or Battle)"; passages enclosed in slantlines printed in boldface]

[Text] Continuous command and control and the success of an operation or battle during the Great Patriotic War depended largely on stability of communications. Its loss inevitably led to disruption of command and control and consequently to defeat as well.

The problems of ensuring stability of communications in the war years were resolved basically in the following directions. Skilled alignment of the communications system in conformity with the commander's decision, instructions of the senior staff and specific conditions of a situation; creation of reserves of communications forces and equipment and their prompt maneuver to restore disrupted communications or for accomplishing new missions; creation of alternative communications routings and their use in case of a disruption of main routes as well as extensive use of back-up communications centers; the capable and prompt movement of control points and accomplishment of measures to protect communications lines and equipment against enemy pressure and to ensure secrecy in operation of communications; constantly keeping communications facilities in a serviceable condition, making up for losses and providing power sources; an increase in the level of tactical-special and moral-psychological training of personnel of signal units and subunits, and so on.

War experience indicated that the role of various communications facilities in ensuring stability and continuity of command and control depended on the level of control, the kind of combat operations, the combat situation present at the front, availability of signal personnel and facilities, and geographic and climatic conditions. Great importance lay in the proper choice of the primary communications facilities in different stages of an operation or battle, which was carried out in planning the communications and adjusted during combat operations.

During the Great Patriotic War wire communications was used widely in defensive operations when there was an opportunity to set up a well-developed communications network, in the forming-up place for an attack and in the first phase of an offensive operation or battle.

Radio communications, which occupied an exceptionally important place in command and control beginning in 1942, was the most reliable and convenient form of communications in the war years under conditions of maneuverable combat operations. It allowed receipt of action reports continuously even in those cases where staffs and CP's were in movement. The continuous operation of radio communications was ensured by the correct and prompt echelonnement of radio facilities serving the centers of corresponding staffs and command posts, as well as by thorough elaboration of radio operating data and a proper allocation of radio frequencies.

War experience indicated that, in addition to use of coordination radio nets and links for ensuring more reliable coordination of communications, it was a wide practice to send liaison officers with radios to the staffs of mobile combined units and sometimes to send them from the combined unit to the staffs of rifle forces.

Along with means of radio and wire communications, extensive use was made at all levels of control of mobile facilities, particularly liaison aircraft which delivered combat documents and liaison officers. They would be converted into the most important means of communication at intensive moments of an operation or battle. The liaison officers' service was a special form of communications using mobile facilities.

Let us dwell on the most important directions for ensuring stability of communications in an operation or battle.

/The commander's decision/ for the operation or battle played a deciding role in the formation of the communications system and assurance of stable functioning of all its elements. The basis of the structure of the communications system here was the fighting strength and operational alignment (combat formation) of troops which determined the location of control points and consequently the location of their communications centers. The most expedient connection of centers with lines stemmed from their mutual location in the structure of the communications system. Communications was established first of all on communications links to combined units (units, subunits) performing the most important missions. The use of alternative channels and communications reserves was envisaged here. The communications system also was arranged with consideration for making it possible to exchange information among interworking troops. The links established by the commander and the procedure for shifting control posts were the fundamental factors which guided the signal officer in planning measures to provide a stable communications system during combat operations.

The 1st and 2d tank armies, in the second echelons of the Voronezh and Central fronts respectively (the defensive operation at Kursk), can be given

as an example of the skilled use of communications personnel and facilities in conformity with the decision made for an operation. The actions of each army were planned in several variants. In particular, the 2d Tank Army might operate according to three variants, while the 1st Tank Army was preparing counterblows along four axes. Communications also was organized for any of the variants. Communications lines were constructed on all predetermined sectors and work was carried out to deploy new communications centers and control-testing points.

The stability of the communications system depended to a considerable extent on its prompt and capable realignment with a change in conditions of the situation. For example, to provide wire communications during the Jassy-Kishinev Operation, it was planned to construct and restore a main communications axis of eight lines along the direction of movement of the headquarters of the 3d Ukrainian Front to Tiraspol', Kitskany and Bolgrad. It was planned to maintain communications over it with the 46th and 37th armies advancing on the axis of main attack. It was also planned to construct a back-up axis of four lines in the direction of Kitskany, Tarakliya and Bakhmutka for communications with 57th Army. But the following changes were made in its organization to ensure uninterrupted communications during the offensive: The capacity of the main communications axis was reduced to six lines and construction of the back-up axis, the need for which had disappeared, ceased. Wire communications with the 37th, 57th and, in certain phases, 46th armies was provided not over the axis, but over communications links.

The possibility of conducting combat operations for the purpose of encircling the enemy was considered without fail in planning communications. The construction of axial and lateral communications lines and movement routes for mobile facilities was not planned through areas where battles for encirclement or heavy enemy resistance were expected. In this instance communications lines were laid around these areas and the construction of lateral lines of communication had to be rejected entirely. If the construction of axial communications lines was delayed if only temporarily in a battle of encirclement (until the elimination of the encircled grouping), this inevitably led to a great lag in the development of wire communications behind the overall rates of troop advance.

Rapid and abrupt changes of the situation under conditions of an uneven development of the offensive generated a need for /redundancy and skilled maneuver/ of lines, channels, methods of organization, and communications personnel and facilities.

Redundancy in the communications system was accomplished in the form of communications lines provided by various facilities on one link, alternative channels, echelonment of communications facilities during a move of control points, general and special reserves of wire facilities, radio communications with the same subscribers over several radio nets and so on.

The essence of maneuvering, for example, consisted of a majority of missions for providing control being accomplished by wire and mobile facilities in the forming-up place and in the first phase during an offensive, with the role of radio communications growing subsequently with rapid rates of troop advance. At the tactical level control was accomplished almost completely using radio facilities (the Belorussian, Jassy-Kishinev and Vistula-Oder operations).

A far-flung network of auxiliary communications centers (VUS) and control-testing points used in the forming-up place and in the first phase of an offensive subsequently was replaced by an axis of several communications channels. When rates of advance slowed, wire communications again expanded: Independent links, lateral lines of communication, auxiliary centers and control-testing points appeared. For example, that is how wire communications was organized in the 47th Army, 1st Belorussian Front, in the Vistula-Oder Operation.¹

The unevenness in development of the communications system made it necessary to maneuver signal units and subunits and move them from some axes to others where the rate of troop advance had risen. Formation of a general reserve of wire facilities and special reserves on communications links was mandatory in organizing wire communications. Facilities of the general reserve most often were used to set up new communications links. Special reserves on links were intended for replacement of damaged sectors of line, for building up a line when it became necessary to move the CP of a subordinate combined unit (unit or subunit) to a new place, and when constructing connecting lines for various purposes.

It was an extensive practice, in creating a reserve of wire facilities, to construct so-called "surrogate" lines from local captured facilities, including barbed wire, in the forming-up place for the attack and especially on the defense. Control would be accomplished over the "surrogate" lines, while authorized cable was in reserve in readiness for use during combat operations (the Bobruysk and Memel operations). Yes, a skilled redundancy and prompt maneuvering of communications forces and facilities ensured stability of the communications system in all phases of combat operations.

/The organization and use of alternative communications links and channels/ was a most important form of ensuring stable functioning of the communications system in the Great Patriotic War. The ways of accomplishing this mission varied. Combined-arms staffs used artillery radio nets and wire communications lines as alternative channels.

Observance of the principle of personal contact of combined-arms and artillery commanders was mandatory for the tactical echelon, and not only in the forming-up place for an attack or on defense, but also in the course of an offensive or during a withdrawal. This was facilitated by joint organization of observation posts by commanders of rifle regiments and commanders of regimental artillery groups (PAG's), battalion commanders and

commanders of PAC subgroups, and artillery observers and commanders of rifle companies.

The switchboards of communications centers of the control posts of combined-arms and artillery combined units and units were connected by special lines, which made it possible to use the communications line of the attached artillery as alternative channels. In particular, the use of artillery wire lines for setting up communications with subordinate units occurred in combined units of the 44th Army of the Southern Front in August 1943. Stability of the communications system in rifle regiments and divisions was increased by arranging wire communications not only over the CP line, but also over the OP line. The organization of communications only from one point was not used by virtue of the instability of such a communications system.

The establishment and extensive use of auxiliary communications centers (VUS's) during the war was an important step toward increasing the stability of the communications system. They were set up in case it was necessary to create alternative channels, for providing communications between control posts located a considerable distance from each other, during operations across a broad front and frequent regroupings of units and combined units. VUS's were most widespread within the communications systems of fronts and armies, but they frequently also were set up in rifle corps and even divisions. During operations across a broad front the VUS's provided communications with troops on secondary axes, in assembly areas of reserves and combined units or units accomplishing a regrouping, and in rear areas in case of a troop withdrawal. The number and locations for deployment of the VUS's were determined by the character of the operation or battle, by missions to be accomplished, by the availability of personnel and facilities, and by the structure of the communications system. For example, four VUS's were set up in organizing wire communications in the 70th Army in August 1944 in the areas of Postupel' and Tulova, as well as at VPU's [auxiliary control posts] in the areas of Mel'niki-Zhechitske and Truden' (see diagram)^{2a}. They increased the stability of the army communications system considerably and reduced the number of facilities and the time needed to deploy it. VUS's also were used to provide communications when attacking at high tempos. Communications with rifle divisions operating on the main axis usually was arranged along an axis during an operation. In this instance a VUS was deployed at the end of the axis and from it connecting lines were laid to command posts of the combined units.³

A special radio group was dropped in the vicinity of the VUS's to maintain stable radio communications at night between the army staff and staffs of the rifle divisions located a considerable distance from the formation staff (50-70 km). That was the case in 61st Army during the Belorussian Operation, where the group's radios operated as retransmitters. During the day, a group from the VUS would move to the new location of a CP in case of an upcoming move by the army staff to another location. The trip by the formation staff to the new CP was accomplished after receipt of a signal that the radios of this CP had taken all communications on themselves.⁴

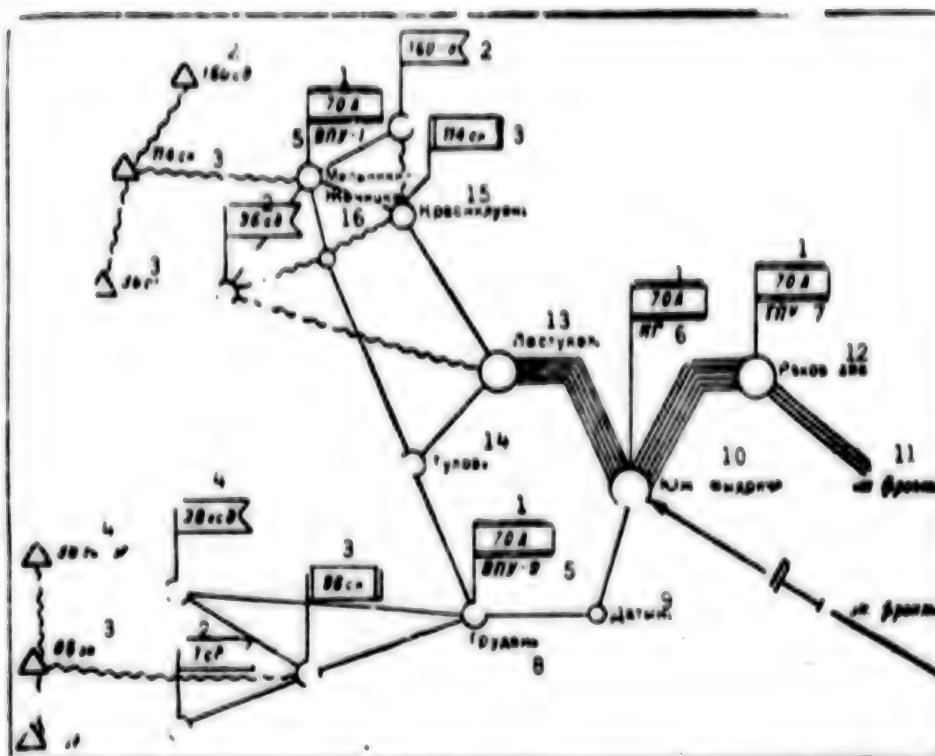


Diagram of the organization of wire communications in 70th Army as of 17 August 1944

- KEY:
1. 70th Army
 2. ... Rifle Division
 3. ... Rifle Corps
 4. ... Guards Rifle Division
 5. VPU-...
 6. Command Post
 7. TPU [rear control post]
 8. Truden'
 9. Datyn'
 10. Yuzh Vydriche
 11. From front
 12. Rakov [second part of name incomplete in original text]
 13. Postupel'
 14. Tulova
 15. Krasniluvka
 16. Mel'niki-Zhechitske

The VUS's would deploy along the axis of the army CP's move and were the basis for the new command posts.

Much attention during the war years was given to achieving /continuity of communications with a change in control posts./ Experience indicated that the following conditions would be observed for ensuring stability of communications and continuity of command and control: The move by a staff to a new area was made only when communications was ready and there was an opportunity for control from the new location; senior and subordinate staffs would move at different times; subordinate staffs would move to areas established or approved by the senior staff; an attempt was made for a prompt change in locations of control posts and the assignment of missions by the chief of staff to the signal officer for preparing communications facilities for this.

For example, during the Belorussian Operation the process of a change in control posts in 65th and 70th armies occurred as follows. First the location of the new CP was planned on the map. Information was collected at the same time from officers who had been there in performing combat assignments as to its suitability for deploying the CP. It was determined once and for all by a ground reconnaissance group made up of officers from the operations department and signal department (section), chief of the communications center, staff commandant and physician. The missions of the ground reconnaissance group were to determine suitability of the CP deployment area, primarily from the standpoint of providing stable communications, convenience of accommodating the staff, convenience of command and control, concealment of the location and sanitary conditions. If a need arose to deploy the CP in a populated point, there was a mandatory evacuation of residents from houses in which it was planned to accommodate the staff.⁵

The conduct of measures to achieve /secrecy of operation and protection of communications lines and facilities/ against enemy action was of great importance for ensuring stability of the communications system.

Throughout the war the Hitlerites attempted to use all available means to disrupt command and control by destroying and damaging communications centers, stations and lines. They used artillery, mortars, aircraft and sabotage groups for this purpose. The enemy attached special importance to intercepting conversations. Strict regimes for operation of radio communications were established to prevent or hinder the enemy's intercept of our radio transmissions, position-finding of operating radios and the discovery of the location of control posts. The right of authorizing or prohibiting (fully or partially) the operation of radios on transmission lay with chiefs of staff no lower than division or brigade. When troops were replaced the newly arrived combined units or units operated for a certain time with the radio operating data and stations of the combined units or units being replaced and from their control posts. During a regrouping it was categorically prohibited to operate with the previous radio operating data at the new locations of combat operations. To prevent the loss of communications during a shift to operating with new radio data, the net control station was assigned an additional radio receiver operating on the previous radio data until communications were established with all subscribers. Security was organized to protect communications lines and stations against actions by enemy sabotage groups.

The stability of the communications system at the tactical level also was increased by locating communications centers of battalions, regiments and divisions in protected shelters and by laying wire lines along trenches and connecting passages. For example, the central telegraph and telephone station was considered an object of primary importance and it was organized first of all along with the commander's OP and the location for the operations department or section.⁶

As a rule, portable radios were accommodated in the shelter next to the commander's work area or in specially outfitted dugouts. Special pits (ramps) were dug for radios installed in vehicles. All engineer structures for elements of the communications center were carefully camouflaged.

During an assault crossing of broad water obstacles, wire communications at the operations level with troops which had crossed was provided over lines consisting of field cable. With an expansion of the bridgehead, a special single-wire river cable and a four-wire heavy cable was used for communications of the army with divisions. Steps were taken to prevent the cable line from drifting with the river current. In particular, the cable splices were stowed in wooden boxes and filled with oil tar. Where they emerged from the river, the cable lines on both banks were carefully buried in trenches to a depth of 0.5-0.75 m, which protected them from damage by enemy fire. Control telephone stations were set up on both shores. During the assault crossing special attention was given to maintaining stable communications with the troops going across and with the crossing commandants. A responsible officer of the army signal department was assigned to each crossing. The practice of assigning persons responsible for communications at a specific crossing for the period of a river assault crossing justified itself, since the facilities were used more effectively and communications were more reliable.⁷ That was the case in the assault crossing of the Dnepr by 60th Army of the Central Front⁸ and 3d Guards Tank Army of the Voronezh Front.⁹

The war demonstrated that successful command and control in an operation or battle depends wholly /on the special training,/ combat cohesiveness, /moral-psychological training of personnel/ of signal units and subunits, their steadfastness, and their understanding of the importance of missions being accomplished. For this reason personnel training in communications techniques and rules was carried on simultaneously with party-political and indoctrination work.

One can judge from the following example how thoroughly means of radio communications and the personnel who had to operate them were readied for combat operations. During preparations for combat operations in the Belorussian Operation, all vehicular radios in III and XVI tank corps and in the radio battalion of the 9th Separate Signal Regiment of 2d Tank Army were refitted into vehicles with increased off-road capability. For example, a mobile radio center of eight sets was installed in a Studebaker in the radio battalion. Combined units and units were brought up to authorized numbers of radios and portable radios were provided with two or three sets

of power sources. From 1 through 10 July 1944 the tank corps conducted courses for radio operators in the corps and brigade radio nets. Here they studied questions of organizing communications and there were radio practices for making radio nets cohesive and for operating on the move.¹⁰ Such thorough preparation of radio communications personnel and facilities had a positive effect on results of combat operations by the 2d Tank Army.

Great Patriotic War experience thus demonstrated that stability of the communications system depends above all on its conformity to the concept of the operation or battle and to conditions of the situation, on the integrated use of various communications facilities, on the establishment of alternative and reserve communications links, on protection of the personnel, structures and communications facilities against the effect of enemy weapons, on the capable use of communications reserves, on the high specialized schooling and moral-psychological training of signal troops, and on the security of communications centers, stations and lines.

In our view, much of what was proven by combat reality is of undoubted interest even in our days and can be used in troop practice. A further quest for ways to achieve stability of the communications system under conditions of the effects of modern weapons and electronic warfare is one of the current problems at the present time as well.

FOOTNOTES

1. TsAMO SSR [USSR Ministry of Defense Central Archives], stack 402, list 9589, file 30, sheets 1-21.
2. "Information Bulletin of the Staff of Signal Troops of the Ground Forces," No 8, Voenizdat, 1946, p 17.
- 3a. TsAMO, stack 427, list 460754, file 1, sheets 1-47.
3. VOYENNY SVYAZIST [The Military Communicator], No 4, 1957, p 21.
4. TsAMO, stack 418, list 460747, file 1, sheets 1-23.
5. Ibid., stack 422, list 47222, file 1, sheets 143-145.
6. "Nastavleniye po polevoy sluzhbe shtabov Krasnoy Armii" [Manual for Field Service of Red Army Staffs], Voenizdat, 1942, Article 133.
7. VOYENNY SVYAZIST, No 4, 1957, pp 21, 22.
8. TsAMO, stack 417, list 10577, file 19, sheets 169-179.
9. Ibid., stack 315, list 4461, file 10, sheets 1-33.
10. Ibid., stack 307, list 4148, file 226, sheets 236-252.

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WARTIME OPERATIONS: OFFENSIVE ACTIONS IN MOUNTAIN-TAIGA TERRAIN

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[Article, published under the heading "World War II and the Postwar Period,"
by Commander of the Red Banner Far East Military District Arm Gen I.
Tret'yak: "Organization and Conduct of Offensive Combat on Mountain-Taiga
Terrain"]

[Text] Combat operations on mountain-taiga terrain always held a prominent place in the theory and practice of Soviet military art. This is above all because the sharp ruggedness of relief, presence of almost impassable natural barriers and scattered axes, and the limited number of roads hinder troop operations and require additional measures in preparing for and during a battle.

Our forces received abundant experience in attacking under difficult conditions during the Great Patriotic War. Combat operations in mountain-taiga regions of the Far East introduced much that was new to the tactics of sub-units and units.

Practical experience indicated that in accomplishing almost every mission in mountain-taiga regions an offensive would be conducted along separate scattered axes with extensive use of deep and close envelopments. In addition, troops always attempted to penetrate through unoccupied gaps to deliver attacks against the enemy flank and rear. Capture of elevations by a frontal attack was done very rarely. Often only a portion of the forces would operate from the front to pin down the main enemy grouping. The main attack usually was delivered on a more accessible axis, where it was possible to make full use of the fire and shock force of tanks and artillery in combination with a deep envelopment of enemy defenses through difficult sectors. In this case the penetration was accomplished by a powerful, swift attack by superior forces and it was developed vigorously into the depth by tanks with tank-mounted infantry supported by aircraft.

In aligning the combat formation, commanders attempted to allocate personnel and weapons so as to ensure greatest independence of troops operating on

each axis. This was predetermined by the fact that their maneuver was precluded entirely or was very difficult during battle.

When the enemy was screening axes accessible for an attack by the use of fortified areas with permanent-type defensive installations, assault detachments and obstacle clearing parties would be included in the troop combat formations. For example, in conducting combat operations in Manchuria and in penetrating Japanese fortifications under conditions of mountain-taiga terrain, both assault detachments or groups and obstacle clearance parties were widely used and often decided the success of battle. In 5th Army of 1st Far Eastern Front alone there were 106 assault groups and 163 obstacle clearance parties operating.¹ Assault groups were set up in forward battalions of army and corps first echelon divisions. They would include a platoon of riflemen, a combat engineer squad, an antitank rifle squad, one or two tanks or SAU [self-propelled artillery mounts], two machinegun squads and two portable flamethrower teams.² The obstacle clearance party would include three or four submachinegunners and three or four combat engineers equipped with a mine detector, prodders, two distributed charges, wire cutters and compasses. Two such parties were attached to each company of the first echelon. The special equipment, good schooling of personnel in the assault groups and obstacle clearance parties, and their capable employment facilitated making passages in obstacles, reconnaissance, the sealing off and rapid destruction of enemy permanent-type defensive installations, and an offensive by our troops at high tempos.

A troop offensive on mountain-taiga terrain involved great difficulties even in the absence of a strong enemy defense. In the Manchurian Operation our troops often operated under bad road conditions. They had to move along trails and negotiate windfelled trees and swampy sectors. Engineer reconnaissance usually operated in the lead of each column. Its mission included above all the laying and marking of the route. Behind it moved tanks of the forward detachment staggered one after the other. They would break trees and lay a crosscountry route up to 5 m wide. Infantrymen and combat engineers of the forward detachment would drag away the fallen trees and clear the crosscountry route. Then came the road and bridge detachment, which would expand the clearing made by the tanks and lay a corduroy road in some sectors. Behind it came the advance guard and finally the detachment for movement support of the main body. As a rule only the forward detachments deployed to conduct battle. The main body usually would advance in columns.

There also was much in the past war that was instructive concerning the use of the combat arms. Battle experience showed that the artillery usually was attached to reinforce rifle subunits. It would operate along the road. The 120-mm and 160-mm mortars and small-caliber artillery systems demonstrated high maneuverability in Manchuria. This was the artillery which proved expedient to include in the forward detachments moving up to seize route centers and important hills.⁴ The rugged nature of terrain and the presence of large tracts of territory on a number of axes greatly hindered the selection and organization of artillery deployment areas, especially for gun systems.

As a rule, tanks and SAU would be attached to the infantry and would operate in its combat formations. It is typical that the appearance even of individual vehicles where the enemy did not expect them led to great success. In accessible sectors of terrain the tanks would be employed en masse on the axis of main attack.

These are the primary features of troop operations and the employment of forces and weapons on mountain-taiga terrain in the Great Patriotic War. They attest to the fact that troops attacking under these conditions can accomplish the assigned missions successfully. But the character of the offensive and methods by which it is conducted have had and still have a number of features.

In the first postwar period (1945-1953) the military art of the Soviet Armed Forces developed on the basis of the abundant experience of the Great Patriotic War and World War II with consideration of the fact that more sophisticated weapons and combat equipment had appeared which increased the firepower, mobility and shock force of troops.

With respect to the tactics of offensive combat on mountain-taiga terrain, it also has developed continuously. There was an increase in the depth of simultaneous neutralization of the enemy, an expansion in the spatial scope of combat as a whole, and an increase in the role of tactical airborne landings and aircraft in accomplishing fire missions, as well as the role of forward and enveloping detachments.

In conformity with theoretical views of the first postwar years, it was envisaged that the main attack on mountain-taiga terrain would be delivered along roads or valleys in combination with a close envelopment of the defending enemy by a portion of the forces or a deep envelopment of his defenses across almost inaccessible terrain sectors.

Considerable attention was given to setting up the initial grouping of personnel and weapons in preparing an offensive. Units and subunits would be given greater independence than under ordinary conditions. They were reinforced with a sufficient amount of artillery (especially howitzers), mortars, tanks and subunits of engineer and special troops. In setting up the grouping an important place was set aside for reliable securing of flanks and forming enveloping detachments and strong mobile reserves. It was planned to employ tanks for direct support of infantry chiefly along roads and valleys.

The theoretical views existing in the first postwar period were tested many times in experimental exercises and exercises with troops under combat training plans. Practical actions by forward and enveloping detachments were very widely employed in them.

In one tactical exercise conducted in the Far East Military District, a rifle battalion operating as an enveloping detachment received the mission of moving to the rear of the main body of defenders and attacking them

suddenly. In estimating the situation, the battalion commander learned that up to a platoon of infantry was defending on an accessible axis along which it was possible to move to the flank and rear of the "enemy." He decided to use one rifle company to seal off the plateau strongpoint and have the remaining forces move in the designated area over a difficult sector. When the subunits carried out this plan, the battalion commander radioed the regimental commander about readiness for the attack. At a common signal the battalion attacked the "enemy" from the rear together with the main body operating from the front and ensured successful accomplishment of the mission.

In the second postwar period, which began in 1954 and which continues at the present time, the fundamental changes in Soviet military art, particularly in tactics, were caused by the introduction of nuclear and other more sophisticated weapons into troop units and by a realignment of their organizational structure.

Nuclear weapons, improved conventional weapons, and full motorization of the troops considerably increased their combat capabilities and caused fundamental changes in the content and character of modern warfare and in the methods of its organization and conduct. It became more dynamic and maneuverable. The actions of units and subunits required their more detailed coordination by objective, place and time and the capable employment of equipment and weapons.

A qualitative leap also occurred in connection with this in the tactics of conducting offensive combat on mountain-taiga terrain. As a rule, the main efforts of troops under conditions of the employment of nuclear weapons began to be concentrated on an accessible axis which permitted conducting the offensive at high tempos against the main enemy grouping. Taking advantage of the results of nuclear strikes, motorized rifle or tank battalions and companies would penetrate swiftly into the depth of his defenses in armored combat or approach march formations and take passes, passages, commanding heights and other important objectives. The companies or battalions would destroy the small "enemy" groups which survived the nuclear strikes usually from the move in armored combat formations. If the terrain did not permit this to be done, the motorized riflemen would dismount and complete the rout by a brief, swift attack. In any case, in conducting the offensive the subunit commanders would attempt to take advantage of concealed approaches for moving to the enemy flank and rear.

Meanwhile, in organizing combat operations involving the use of nuclear weapons on mountain-taiga terrain, the need arose to consider the possibility that obstructions, demolished areas and conflagrations would appear as a result of nuclear strikes in mountain valleys, small river valleys, gorges and canyons which might hinder troop actions. And so in order to destroy the enemy in such places it is obviously expedient to employ low-yield nuclear weapons with air bursts and to assign strong obstacle clearing detachments to make passages in the resulting obstacles.

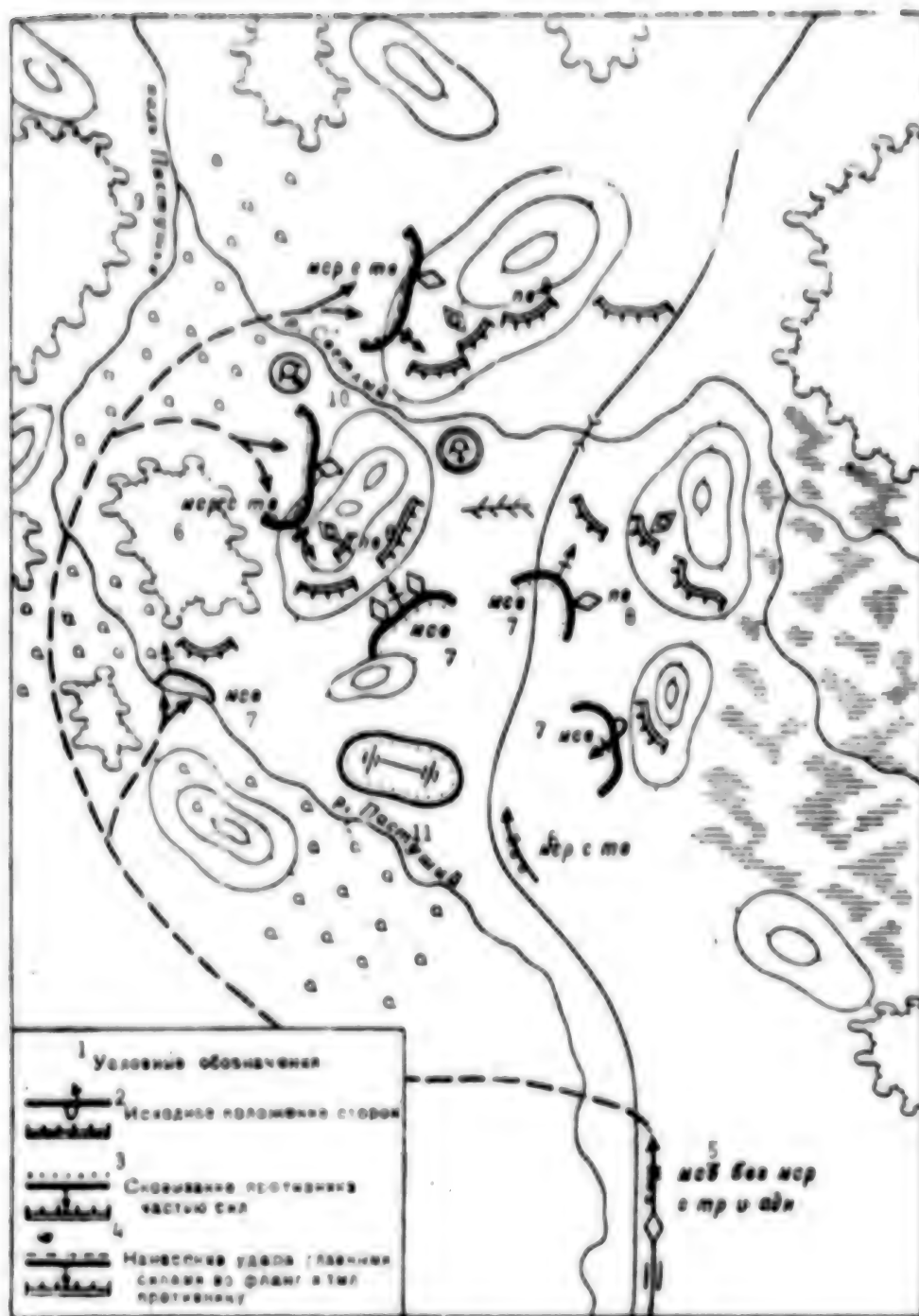
During exercises an offensive involving the use of different means of destruction was conducted not only along easily passable axes--valleys, roads and mountain plateaus, but, as exercise experience indicated, in other terrain sectors as well, including areas difficult of access and even in high mountain regions. The movement of subunits along roads and valleys was combined with actions by enveloping detachments on less accessible sectors of mountain-taiga terrain. Tactical airborne landings made in the enemy rear to capture such important key centers of resistance as mountain passes, commanding heights, road junctions and crossings began to play an especially important role in achieving success.⁵

The selection of the axis of main attack was of no small importance in organizing combat operations on mountain-taiga terrain. The possibility of defeating the enemy in compressed periods of time and moving to the rear of his main body usually was considered here. An analysis of the exercises which have been held indicates that in making their decision, commanders usually attempted to defeat the enemy's main grouping, but did not always target the main attack directly against it. Often the enemy main body or a portion thereof was isolated from the remaining troops by enveloping detachments interworking with tactical airborne forces, and then destroyed piecemeal. At times the main efforts of our troops were concentrated against the enemy's main body, with several subunits of attackers containing it from the front and the remaining delivering an attack against the flank and rear. For example, that is how Maj V. G. Dobrynin's motorized rifle battalion operated in an exercise in the summer of 1977 (see diagram).

In aligning combat formations, special attention was given, as before, to the independence of motorized rifle subunits. Motorized rifle battalions operating on separate axes in exercises often received reinforcements of up to a tank company, an artillery battery, AAA platoon, combat engineer platoon, tank bridgelayer and, where necessary, road construction vehicles as well. This ensured independence in conducting combat operations and, where necessary, a prompt maneuver for moving to the enemy's flank and rear across almost inaccessible terrain sectors. Tank subunits would operate in the first echelon only on axes accessible to tanks. Sometimes they performed independent missions of seizing mountain passes, road junctions, important populated points and dominant heights. In this case they were reinforced with motorized rifle and combat engineer subunits. As a rule, when operating on difficult terrain, tanks would be attached to motorized rifle subunits or would be employed as a reserve.

Echelonment of the combat formation in depth depended on the enemy defenses and terrain conditions. The assignment of tactical airborne forces was envisaged for coordination with forward and enveloping detachments and raiding parties.

As shown by the experience of troop exercises, the content of troop combat missions on mountain-taiga terrain was determined based on the location of the unit and subunit in the combat formation, the character of enemy defenses, weapons employment and terrain conditions. While motorized rifle and tank



Operations by Maj V. G. Dobrynin's motorized rifle battalion in offensive combat

- KEY:
- | | |
|--|----------------------------|
| 1. Legend | 6. MRC with tank platoon |
| 2. Initial position of sides | 7. Motorized rifle platoon |
| 3. Enemy contained by portion of forces | 8. Infantry platoon |
| 4. Main body attack on enemy flank and rear | 9. Pastush'ya Valley |
| 5. Motorized rifle bn less motorized rifle co [MRC] with tank co and arty bn | 10. Svetlyy River |
| | 11. Pastushiy River |

subunits would be assigned missions of approximately the very same depth and content in an offensive in broad valleys, on mountain plateaus and along rivers as during operations under ordinary conditions, the missions were considerably lesser on difficult terrain. For example, the immediate mission of a battalion attacking in the first echelon on an axis where a nuclear strike had been delivered against enemy defenses might consist of taking a group of hills on which a first echelon enemy company was defending. The battalion subsequently would be given a direction of attack and it could be retargeted to take a commanding height or a mountain pass. Under other conditions it would be assigned a mission of less depth which included the capture of just one important hill.⁶ A company in the mountains might receive a mission on a separate axis and it might operate independently apart from the battalion and neighbors.⁷

A feature of coordination was that it was organized under conditions of sub-unit and unit operations across a broad front and along separate axes. For this reason the joint actions of troops to capture mountain passes, passages and commanding heights were tied together especially precisely.

In organizing control on mountain-taiga terrain, commanders and staffs would think through with special care matters of providing uninterrupted communications and surveillance during the offensive.

Substantial changes occurred in the theory and practice of conducting offensive combat. The concentration of troops in a limited area for a lengthy time was not permitted as a result of the continuous threat of the enemy's use of nuclear weapons. For this reason the penetration even of a deliberate defense was done from the move, which permitted concentrating troops at the penetration sector only at the moment of the attack.

Exercises with troops confirmed war experience about the simultaneous nature of an attack on mountain-taiga terrain as well. An attack usually began after fire preparation, during which artillery and mortars would neutralize or destroy enemy weapons and personnel primarily on commanding heights and in strongpoints adjoining the roads. Motorized rifle subunits usually attacked in dismounted formation with tank support. The APC's and IFV's [infantry fighting vehicles] would move in bounds, from cover to cover, at a distance allowing support of the advancing infantry with machinegun fire and making it difficult for the enemy to destroy them with the fire of antitank weapons. At times, in order to lead the enemy astray, an attack would begin earlier on a secondary axis, which made it possible to divert defending forces from the main axis. If terrain was inaccessible for tank operations, the motorized rifle subunits and units would attack on their own. After these sectors were crossed, the tanks would move up and attack directly in the motorized rifle combat formations or ahead of them.

With the destruction of the enemy in strongpoints, subunits and units moving into a valley or onto a mountain plateau would close up into approach march or march formation and, if terrain conditions permitted, they would advance resolutely on APC's and IFV's into the depth of enemy defenses for the

purpose of swift seizure of mountain passes, dominant heights and so on. Extensive use was made here of enveloping detachments. The success of their operations depended largely on concealment in making a maneuver. In this connection, a maneuver usually would be accomplished over terrain sectors difficult of access and affording concealment on an unexpected axis for the enemy. The employment of tactical airborne forces on mountain-taiga terrain, intended for the capture of mountain passes, defiles and dominant heights, was a new element.

An operating method such as "infiltration" into the depth of enemy combat formations also found application for overcoming a deliberate defense in mountain-taiga regions. This is facilitated by the nodal character of defenses, the presence of concealed approaches thereto and the presence of gaps between strongpoints unoccupied by troops. For example, in one tactical exercise a motorized rifle platoon penetrated through gaps between "enemy" platoon strongpoints by squads in dismounted formation under cover of fog. Concentrating at the designated assembly point, it attacked the defenders from the rear at the signal, simultaneously with the main body operating from the front. This attack was unexpected by the defenders and decided the outcome in favor of the attackers.

But this method of operations presumes a good knowledge of the terrain and the ability to orient oneself on it. In the example in question, despite the shallow depth of infiltration (some two kilometers), one of the squads strayed and reached its platoon only from the sound of "battle" after the attack began.

Exercises on mountain-taiga terrain confirm the growing importance of the role of attack helicopters. They were employed to support attacking subunits (they destroyed "enemy" personnel, combat equipment and weapons), for performing reconnaissance, for spotting artillery fire, for landing tactical airborne forces, for moving weapons and equipment across impassable terrain sectors, for delivering supplies and for evacuating wounded.

Under conditions where there are no roads at all, attack helicopters sometimes proved to be the only means for supporting enveloping detachments operating in dismounted formation. But special attention must be given to organizing precise coordination among them.

Fighter-bombers found extensive use on mountain-taiga terrain. The effectiveness of small groups of such aircraft is much greater than when operating on level terrain, especially if they deliver strikes against the enemy in narrow and almost inaccessible areas, creating obstructions on roads and in gorges and setting forest fires. The role of aviation rises considerably during combat in the depth and during pursuit.

Exercise experience indicates that in order to accomplish fire support of motorized rifle and tank subunits at maximum range, the artillery firing positions are best chosen nearer the forward edge, providing them reliable security by a portion of the forces of motorized rifle subunits. Consideration

must be given here to the fact that it is difficult for artillery to move and select places suitable for firing positions on mountain-taiga terrain, and that considerably more time is required to organize the firing positions. In addition, it is more difficult for orientation, performance of artillery reconnaissance and survey of combat formations. For this reason it is more difficult to conduct fire, correct it and maneuver it laterally.

The employment of tanks in taiga areas requires more thorough technical support. They consume more fuel and lubricants because of the hard soil and the abundance of ascents, descents and turns. This makes it necessary to bring the refuellers closer to combat formations. During the attack and an offensive, tanks usually operate in the combat formations of motorized rifle subunits and work closely with them. Considering the fact that during the past war tank units suffered heavy losses chiefly from the fire of anti-tank weapons, a motorized rifle squad or platoon began to be assigned to each tank in postwar exercises. The mission of these subunits includes destruction of enemy tank destroyers and giving assistance to their vehicles in crossing obstructions and other obstacles.

Conflagrations may have substantial influence on an offensive on mountain-taiga terrain, especially in a drought period. In organizing combat operations one has to consider the possibility that they might arise and the methods of combating them. As practice indicates, forest fires have a moral effect on personnel and may lead to heavy losses in life, weapons and equipment. For this reason subunits and units must train to fight them.

In analyzing the development of offensive tactics on mountain-taiga terrain in the postwar period, it is possible to trace certain trends. In our opinion, the primary ones are: an increase in the scope of combat (width of frontage and rates of attack, depth of combat missions and of simultaneous destruction of the enemy); an increase in the role of aviation, especially helicopters, as well as airborne forces in achieving success in combat; more extensive use of the method of conducting an offensive from the move, along axes; an increase in the importance of forward and enveloping detachments and advance guards in exploiting the results of nuclear weapons and in supporting high rates of advance.

It appears to us that it is impossible to take in all aspects of conducting offensive combat on mountain-taiga terrain in one brief article. But a few principles should be mentioned. We can include among them above all thorough reconnaissance of the enemy and terrain and determination of unoccupied sectors in the enemy defenses; the close interworking of motorized rifle subunits with tanks, artillery, aviation including attack helicopters, and other combat arms; the use of wide maneuver for moving to the flank and rear of the enemy, the use of forward and enveloping detachments for this purpose and the use of tactical airborne forces in combination with troops attacking from the front; the capture of key positions in the zone of attack which provides domination over the enemy and freedom of maneuver for subsequent operations; and the timely formation of troop groupings capable of operating independently along isolated axes.

It should be emphasized in conclusion that in the course of subsequent combat training there must be a continuous quest for the most suitable forms and methods of an offensive on mountain-taiga terrain, a careful study of the experience of local wars, prompt recognition of new trends in the development of tactics and the drawing of conclusions.

FOOTNOTES

1. "Krasnoznamennyy Dal'nevostochnyy" [Red Banner Far East], Voenizdat, 1971, p 233.
2. L. N. Vnotchenko, "Pobeda na Dal'nem Vostoke" [Victory in the Far East], Voenizdat, 1971, pp 351-352.
4. Ibid., pp 347-348.
5. I. N. Vorob'yev, et al., "Boevyye deystviya v osobnykh usloviyakh" [Combat Operations under Special Conditions], Voenizdat, 1967, p 61.
6. Ibid., p 66.
7. "Boevoy ustav pekhoty Sovetskoy Armii (otdeleniye, vzvod, rota)" [Soviet Army Infantry Field Manual (Squad, Platoon, Company)], Voenizdat, 1959, Article 170.

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WARTIME OPERATIONS: DANUBE FLOTILLA SUPPORTS GROUND TROOPS

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[Article, published under the heading "Memoirs," by Candidate of Geographical Sciences Vice Adm (Ret) V. Grigor'yev: "The Danube Flotilla in the First Days of the War"]

[Text] Vissarion Vissarionovich Grigor'yev was born on 17 April 1907 in the city of Dankov, Ryazanskaya Guberniya. He began his working life as a 14-year-old teenager in Ryazan'. He joined the Komsomol in 1921 and four years later traveled to Leningrad, to the Naval School, on Komsomol orders. After completion he served from 1930 through 1937 in various positions aboard ships of the Red Banner Amur Flotilla, commanding the monitor "Krasnyy Vostok" during the last four years. From there he was sent to study in the Naval Academy, which he completed in July 1940 and was assigned to the position of chief of staff of the Danube Naval Flotilla. He was accepted as a member of the VKP(b) [All-Union Communist Party (Bolshevik)] in January 1941.

With the beginning of the Great Patriotic War Grigor'yev capably arranged the work of the Danube Flotilla staff. In November 1941 he was appointed chief of staff of the Novorossiysk Naval Base of the Black Sea Fleet. Later he headed in succession a department in the Combat Training Directorate of the Narkomat [People's Commissariat] of the Navy and the staff of the Volga Naval Flotilla. In September 1943 he assumed command of the Dnepr Naval Flotilla, with which he covered a glorious combat path to Berlin.

Vice Adm Grigor'yev has been decorated with two orders of Red Banner, the orders of Ushakov 1st and 2d class, the Order of Nakhimov 1st Class, two orders of Red Star, many medals and two foreign orders. He lives in Moscow at the present time. The following are his memoirs of combat operations of the Danube Naval Flotilla in the first days of the war.

My combat destiny took shape so that I met the Great Patriotic War in Izmail as chief of staff of the Danube Flotilla, and finished the last battle on the Spree River in the center of Berlin, commanding the Dnepr Naval Flotilla. Many memorable events occurred during that time, but I recall in particular the very first and most difficult and strenuous days from 22 June through 19 July 1941, when navymen of the Danube Flotilla, working together with ground unit personnel, not only did not give up a single inch of native soil to the enemy, but they themselves recaptured from him a base of operations over 70 km long. Documents of the Central Naval Archives helped me bring alive in memory the little-known heroic pages of those far-off days.

Our Danube Flotilla, commanded by Rear Adm N. O. Abramov, numbered 5 monitors, 22 armored boats, 7 minesweeping boats and other ships and vessels. They were based at Izmail, which was the main base, at Reni and at Kiliya. The Flotilla also had the 96th Fighter Squadron (16 I-16 aircraft), the 46th Separate AAA Battalion, the Danube Coastal Defense Sector, a separate local rifle company and the 17th Machinegun Company.¹ It was part of the Black Sea Fleet, which was commanded by Vice Adm F. S. Oktyabr'skiy, and it was under operational control of the Odessa Military District.

Even today I recall the morning of 22 June. The first combat reports: Ships were under aimed fire of batteries and were forced to maneuver; the enemy was attempting to make an assault crossing of the Danube and Prut under cover of artillery fire... The operators quickly plotted situation data on the map. I tried to analyze the situation taking shape as quickly as possible. It was apparent that the enemy was delivering the main attack in the vicinity of Kartal-Razdel'nyy. The guns of the monitors and shore batteries were firing on him. There were more attempts here to make an assault crossing of the river. The remaining attacks were diversionary and for containment. We feared the penetration of ships from Galats and their movement toward Izmail.

...Fighting flared up. The artillery duel became increasingly fierce. Our monitors "Udarnyy" and "Martynov" and the coastal and AAA batteries operated excellently. At midday 12 bombers bombed Izmail. All aircraft of the fighter squadron headed by Capt A. I. Korobitsyn immediately took off. The Danube eagles shot down five divebombers and put the rest to flight.²

After receiving instructions from the Flotilla commander, I urgently left for the OP of Battery No 725, from which there was a good view of the Satul-Nou Peninsula and reaches of the Danube almost to the Tulchin Branch. I had to see with my own eyes and estimate the situation at hand. As a result of what I saw I concluded that the base of operations on the right bank was as necessary as air. I reported my thoughts to Rear Adm Abramov and received his instructions: Immediately contact the commander of the XIV sk [Rifle Corps] by telephone and request his approval to seize the base of operations and to assign one rifle battalion as a landing force. But wire communications suddenly broke off and I had to take a vehicle to corps

headquarters in Bolgrad. The corps commander listened carefully to me, then summoned me to the map and said:

"Take a look, Comrade Grigor'yev, combined units and units of the corps are fighting here. The enemy is pressing and fighting his way into the depth of our defenses. I not only cannot assign a battalion, but I intend to remove some of the subunits from the Danube to prevent an enemy breakthrough toward Kishinev. Although in principle I do not object to capturing the base of operations."

On returning to Izmail I reported results of my trip to corps headquarters to the Flotilla commander.

"We will request authorization from the Black Sea Fleet Military Council for landing a force," decided Rear Adm Abramov and immediately gave necessary instructions to the staff and the flag communications officer.

The 22d of June was coming to an end. In a day of continuous firefights, the Flotilla's ships and batteries fired 1,600 rounds at the enemy. Six attempts at making assault landings had been repulsed.³

On receiving authorization from Sevastopol' to land a tactical force on the Satul-Nou Peninsula, the Flotilla commander instructed me to submit a plan for accomplishing the mission. We planned the landing for 25 June, after artillery preparation and with fire support of shore batteries and the monitors "Udarnyy" and "Martynov." Rear Adm Abramov visited the ships and subunits assigned for the landing together with me and the flag specialists. The personnel had an elevated, fighting mood. Everyone wanted to take part in the offensive operations. On the morning of 25 June four armored boats with subunits of the 79th Naval Border Guard Detachment aboard penetrated from the Kislitskaya Channel to Satul-Nou. After landing, the landing personnel routed the enemy in a brief clash, captured 70 persons and seized two guns and up to ten machineguns. According to statements by prisoners, the peninsula garrison, which had fled over the low flood plains, consisted of two infantry companies, a platoon of border guard personnel and a platoon of police.⁴ Soon one battalion of the 287th Rifle Regiment, Chapayev 25th Rifle Division, was moved by the Flotilla's ships to the base of operations on instruction of corps headquarters. Expanding the beachhead laterally and in depth, navymen and infantrymen supported by ships and coastal batteries of the Flotilla had taken the settlement of Pardino and the islands of Big and Little Daller and had firmly dug in on the right bank of the Danube by day's end. But its greater part, particularly the city of Kiliya Staraya and the settlement of Periprava, were in enemy hands. The Flotilla staff began preparing for the landing of new forces.

In coordination with Col A. S. Zakharchenko, commander of the Chapayev 25th Rifle Division, the Flotilla commander decided to land a force in Kiliya Staraya. The 23d Rifle Regiment, 99th Divisional Artillery Regiment, 4 armored boats, 10 border guard launches and Battery No 65 of the Danube Flotilla were assigned for this purpose.⁵

On the eve of the landing, our squadron's aircraft performed thorough aerial reconnaissance of the Danube shore from Cape Satul-Nou to the Black Sea. On the night of 25/26 June the 23d ap [Rifle Regiment], subunits of which made up the landing force, secretly boarded boats in Kiliya Novaya. Artillery preparation began at dawn. It was accomplished by the 99th ap [artillery regiment] and Battery No 65. At 0600 hours the 4th Armored Boat Detachment and other boats with the landing force aboard approached shore and began the landing while overcoming the enemy's heavy fire.

By the end of the day on 26 June landing personnel had taken the settlement of Pardino and Tataru Island. And so on two days the Flotilla together with ground forces had taken a base of operations 76 km wide and up to 3 km deep and had organized its defense. As a result the Izmail group of ships obtained freedom to maneuver for artillery support of the flanks of ground units and for reinforcing the Reni and Kiliya groups if necessary. It became possible for ships to navigate the Danube not only at night, but during the day as well. The port of Izmail already could perform loading and unloading operations of vital importance to the Flotilla. Successful occupation of the base of operations was facilitated by secrecy of preparations, swiftness of maneuver and powerful fire support.

Combat operations were conducted continuously on the Danube. The party and government highly esteemed the successful, bold and productive actions of personnel of the Danube Flotilla. As early as the beginning of July the Order of Red Banner had been awarded for capable direction of combat operations and the courage and val r displayed to Flotilla Commander Rear Adm N. O. Abramov, Chief of the Political Propaganda Department Brigade Commissar V. K. Belenkov, Commander of the Kiliya group of ships Capt-Lt N. K. Kubyahkin, commander of Shore Battery No 724 Sr Lt A. V. Sidorov, commander of the 17th Machinegun Company Sr Lt M. N. Matveychuk, its politruk Jr Politruk G. Ye. Khmel'nitskiy, and pilots Capt A. I. Korobitsyn and Sr Lt L. F. Borisov. Governmental awards also were presented to seamen V. V. Soloukhin, A. N. Zhukov, Ya. N. Polyakov, V. N. Shitarev and others.

The monitors represented the greatest danger for us. Raids by the Black Sea Fleet bomber aviation with the mission of destroying them did not produce the desired results--the location permitted them to be well concealed. Rounds of the 102-mm guns of our monitors, except for the "Udarnyy," which had 130-mm guns, could penetrate the armor of enemy ships only from the closest distance and at angles of impact near 90 degrees. But the probability of such range and angle of impact was very low. For this reason, in case the enemy monitors penetrated the Danube downstream, we planned to employ the massed fire of ships and shore batteries against them and deliver air strikes.

We also took advantage of other combat capabilities. For example, we decided to lay a number of offensive minefields on the enemy's probable routes of penetration and movement into the zone of the Danube Flotilla in order to split the enemy forces and prevent the link-up of the Galats (main) and Tulchin groups of enemy ships. We planned to lay the minefields in the

vicinity of Galats and Lake Krapin. Capt-Lt N. A. Isarev, the Flotilla's flag mine specialist, worked out the plan for laying the mines. It was he who briefed the ships' crews on laying them. Engr-Capt 3d Rank A. N. Munayev, the energetic chief of the technical department, outfitted the armored boats with devices designed in the Flotilla for laying mines on the move.

On the night of 23/24 June four armored boats, screened by the monitors "Zhemchuzhin," "Zheleznyakov" and "Rostovtsev" and Shore Battery No 724, laid 24 Type "R" mines in one line in a 20-minute period under enemy fire in the vicinity of the mouth of the Pisik River not far from Galats across the Danube Channel. On 1 July this minefield was reinforced with another eight mines.⁶ It played a large part in repulsing the monitors' attempt to penetrate from Galats downstream along the Danube to Izmil.

On 26 June the armored boats laid a minefield at the mouth of the Tulchin Branch. The shore batteries and monitors screened the laying of mines. Capt-Lt Isarev, who was on one of the armored boats, provided the immediate direction of it. Immediately on entering the Tulchin Branch the armored boats encountered camouflaged enemy monitors anchored near shore. Both sides immediately opened fire from a range of 100 m. After turning on a reverse course and laying a smoke screen, the armored boats laid eight mines and returned to Izmil without losses. To prevent the movement of an enemy floating battery armed with 152-mm guns from Lake Krapin into the Danube, yet another minefield was laid on 29 June. The enemy monitors thus were scattered and blockaded by the minefields.

Nevertheless the enemy ships attempted to penetrate from Galats downstream along the Danube. It happened on 27 June. I recall this day well. At around 2100 hours reports came to our BFKP [flag headquarters ashore] almost simultaneously from the commander of the forward detachment of ships, from the shore battery and from a SNIS [lookout and communications service] post. All three reports contained the same: "Enemy monitors are proceeding at full speed from Galats downstream along the Danube. Shore batteries from Galats and Isakcha are conducting volley fire against our ships located in Reni." So here it was, an attempt at the breakthrough we had long awaited!

"Well," said the Flotilla commander, "let's meet the guests properly!"

The flag communications officer immediately passed on Rear Adm Abramov's order: The 96th Squadron was to deliver a bombing strike against the monitors, ships of the Reni Group were to prepare for battle, and Shore Battery No 724 was to be ready to open fire on the enemy. In a little while these forces received the command to open fire. The monitors did not stand up under the concentrated attack of the Danube personnel. They turned back and departed for Galats. This was the enemy's first and last attempt to penetrate downstream along the Danube.

We realized well that we were not on the axis of the enemy's main attack. Nevertheless, his onslaught was strong. The tension did not let up even

for an hour. Fighting went on on land, on the water and in the air. On 30 June, when I was at the regular briefing, the chief of staff of the XIV sk said:

"It is difficult for us, Comrade Grigor'yev. The enemy has made an assault crossing of the Prut with the forces of two divisions in the vicinity of Felchiu and is pressing our units toward Bolgrad. It is even more difficult for the neighbor on the right, the XXXV Rifle Corps. The enemy has seized the city of Bel'tay and is advancing on Kishinev."

Saying nothing for awhile, he continued:

"The corps commander decided to remove a considerable portion of forces from the sector of Reni and the mouth of the Danube and to send them to the threatened area of Felchiu-Tsyganka."

The situation on land indicated the clear threat to ships of the Reni Group. The situation was complicated even more by regular bombardments of shore batteries and monitors and by air raids. It was clear that the ships could not remain at the mouth of the Prut and so, at the order of the Flotilla commander, they proceeded downstream with the current (the engines were not started for purposes of concealment) to the mouth of the river Viket by the end of 29 June and entered Lake Kagul on 30 June.

On that same day the enemy made an attempt to throw our subunits from Cape Satul-Nou, committing two infantry regiments supported by the fire of shore batteries. Our Flotilla's guns opened fire on the infantry and batteries and the squadron took off. The attack bogged down. Enemy soldiers turned to flight. They were strafed by the fighters in ground-level flying.

It should be noted that the tension was high for our pilots on that day, as it was, by the way, on other days as well: Together with AAA they repulsed air raids five times and flew several sorties on reconnaissance.

During the first days of July the situation on the land front continued to worsen. Pressing the ground units toward Bolgrad, the enemy created the threat of encirclement of the XIV sk, as well as the threat of blockading Flotilla ships. The corps commander stepped up the movement of troops from the Reni-Danube mouth sector to reinforce the weakest places. Responsibility for defense of the left bank of the Danube fell on the Flotilla in connection with the departure of the corps unit. This forced the command element to set up a mobile defense of separate groups of ships and establish patrol service to prevent an enemy crossing of the Danube.⁷ The armored boats and escort vessels were dispersed accordingly along the Danube and the division of monitors was broken into two groups for this same purpose. The first group, which included the monitors "Zheleznyakov," "Rostovtsev" and "Udarnyy," was assigned the mission of occupying firing positions near Izmail and Pardina during hours of darkness and, in coordination with shore batteries No 725 and 726, prevent an assault crossing of the Danube. The second group ("Martynov" and "Zhemchuzin") was sent to Vilково, where it

carried out the very same mission together with a portion of the escort vessels and armored boats. The other armored boats and escort vessels performed patrol service and countered the crossing of small enemy groups across the Danube. This allocation of forces allowed the Flotilla to keep its entire operations zone under constant surveillance and react promptly to a change in the situation.

I was urgently summoned to Belgrad by the commander of XIV sk on the evening of 5 July.

"Comrade Grigor'yev," said the general, "our situation is critical. The enemy may envelop the right flank, and so corps units are beginning to withdraw to the Lake Yalpukh line. To keep from being cut off, the Reni group of ships has to break through to Izmil on this same night."

At 2230 hours the ships began the penetration in an unfavorable situation. It was a moonlit, cloudless night and there could be no thought of concealment. As soon as the first ship left Lake Kagul for the Danube an enemy battery opened fire against her but three minutes later the battery was destroyed by the intensive fire of the monitors. The ships proceeded past the fortified point of Isakcha, pressing close to the high bank so as to be in a dead zone for the enemy batteries. They opened fire when the ships passed far ahead of the Isakcha Hills. The armored boats quickly concealed the monitors with a smoke screen by dropping smokepots into the water. The enemy shifted fire to the smoke sources, assuming that the pots were aboard ships. The rounds began to fall far short. At this same time the monitors and a battalion of the 218th Artillery Regiment from Kartaly were conducting volley fire against the enemy batteries.

After leaving the Isakcha bombardment zone the ships came under fire from batteries of Tulcha and Chatal. The enemy laid down a fixed screen of fire consisting of salvos every 12-15 seconds. Our guns opened up volley fire from Izmil against the enemy batteries and neutralized them.

On the morning of 9 July the Reni group of ships arrived at Izmil without losses. Its daring breakthrough was successful thanks to the tactically competent, capable actions of the commanders, proficiency of the personnel and precise coordination with shore artillery.

The enemy made furious attempts to cross the Danube, but all of them were repulsed by the Flotilla's ships and shore batteries, with the enemy suffering heavy losses. On 13 and 14 July enemy monitors left the Tulchin Branch for the Danube and attempted to bombard Izmil from close range. But after receiving several direct hits by rounds from our batteries, they subsequently did not dare show themselves in the artillery's impact zone.

In connection with the command element's decision to remove troops from Moldavia, the Danube Flotilla was assigned the following missions: to evacuate its rear areas, screen the withdrawal of the XIV sk, and have the ships break through to the sea for the crossing to Odessa. The Flotilla

immediately began carrying them out. On 17 July auxiliary vessels, barges and rear services entities were sent to Odessa.

On 18 July the Flotilla commander and a staff operations group moved with the BFKP in Izmail to the monitor "Udarnyy." On the night of 18/19 July the ships penetrated the fortified area. On the morning of 20 July the Danube Flotilla arrived in Odessa with a strength of 100 units.

That is how we ended the period of very difficult struggle lasting 27 days. It is understandable that the enemy at that time was directing the points of his main attacks at other sectors of the front. Nevertheless, the steadfast defense of our borders by the Danube personnel together with the ground troops, their offensive operations, capture of a base of operations on enemy territory and its firm retention for 22 days at that time had not only a military significance, but a political one as well.

People's Commissar of the Navy Adm N. G. Kuznetsov highly esteemed the actions of the Danube personnel in the first days of the war. In a message sent to the Flotilla commander on 16 July, he wrote: "The Danube Naval Flotilla operated bravely and resolutely, accomplishing fully all missions assigned it and demonstrating superb examples of combat work. I am sure that the famed Danube personnel will continue to strike the enemy just as they did on the Danube!"⁸ And that is how it was. Danube personnel distinguished themselves in fighting on the Black Sea and the Sea of Azov and, in 1944-1945, reached Budapest and Vienna along a grand, victorious path.

FOOTNOTES

1. TsVMA [Central Naval Archives], stack 19, file 6535, sheets 1-4.
2. Ibid., sheet 5.
3. Ibid., sheet 7.
4. Ibid., sheets 16, 17.
5. Ibid., sheet 17.
6. Ibid., sheets 20-21.
7. Ibid., sheets 30, 31; stack 19, file 119, sheet 15.
8. Ibid., stack 19, file 6535, sheet 42.

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RADIOELECTRONIC WARFARE IN THE ISRAELI-ARAB WARS

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[Article, published under the heading "In Foreign Armies," by Docent and Candidate of Military Sciences Engr-Lt Gen A. Paliy: "Radioelectronic Warfare in the Israeli-Arab Wars" (Based on foreign press materials); passages enclosed in slantlines printed in boldface]

[Text] Intensive electronic warfare was conducted in the Near East wars unleashed by Israeli aggressors in 1967 and 1973 against the Arab states. Radar, radio communications and radio navigation facilities set up active and passive electronic jamming. Attacks were delivered against radars by missiles homing in on the emissions, by tank subunits, artillery and sabotage groups. Radar and infrared decoys were employed to divert guided missiles from aircraft and ships. Radio deception was carried out. The RES [radio electronics] of the sides in turn were protected against electronic suppression and destruction by homing missiles.

/In June 1967/ Israel attached primary importance to the factor of surprise in attacking Egypt, Syria and Jordan. A large role was given to electronic warfare [EW] in this along with measures of operational cover and deception. Thorough reconnaissance was performed in EW interests during preparations for the aggression, at which time reconnaissance located the positions of radars, ZRK [surface-to-air missile (SAM) systems] and AAA batteries, control posts, communications centers, and the airfield network; and obtained data needed for conducting EW. As a result, even before the attack on the Arab states, Israel had vast information about their radio communications systems, primary and alternate frequencies of the RES, and state and military radio communications lines.

Israel's plan of aggression envisaged the disruption of interstate radio communications of Egypt, Syria and Jordan, disorganization of command and control and suppression of air defense radar operations. In carrying out their plan, the Israeli aggressors, in the first mass air attack on the morning of 5 June 1967, disrupted the operation of radars for detection and for control of aircraft and air defense weapons, and jammed radio communications between Cairo, Damascus and Amman. In order to achieve surprise

and bypass the Egyptian air defense system, attack forces of the aggressor aviation made a raid from the Mediterranean at altitudes of 150-300 m. On approaching the Egyptian shore, Israeli aircraft set up passive and active jamming of radars of the air defense troops. The radars and aircraft and air defense weapons control posts were destroyed in first order during strikes against airfields.¹

On the first day of the aggression Israeli aircraft knocked out the Egyptian front communications center on the Sinai Peninsula. At this same time sabotage detachments landed there from helicopters destroyed the wire communications lines connecting the Egyptian General Staff with headquarters of the combined units. As a result the control of Egyptian troops on the peninsula was disrupted. The Israeli command performed radio deception by entering the radio communications of the Arabs' tank subunits and aircraft to transmit false orders and commands. As reported by the foreign press, the Israelis sometimes succeeded in assuming "control" of Arab tanks and aircraft and directing them to areas or to airfields occupied by Israeli troops.² For example, during the forward movement of the Egyptian 4th Tank Division on the Sinai Front to deliver a counterblow against the aggressor, Israeli deception personnel transmitted an order over this combined unit's radio net for a withdrawal of its regiment beyond the Suez Canal. The order was taken as genuine and the counterblow did not take place.³

In order to achieve surprise, the troop concentration areas and time were kept secret as radio facilities were used on a limited basis until the troops assumed the offensive. The regime of aircraft flights and operation of radio communications and radar facilities was kept unchanged.

These measures hindered the control of combat operations as well as the coordination of aircraft, air defense weapons and ground troops of the Arab states. As a result the Israeli command succeeded in achieving operational surprise in unleashing the war and inflicting serious damage on Egypt, Syria and Jordan in a seven-day period.⁴

During the Israeli-Arab war /in October 1973/ EW was conducted more intensively, with consideration of the experience gained in previous wars in the Near East and in Vietnam. A typical feature of this war was the fact that it reduced chiefly to a struggle by aircraft against air defense weapons and by tanks against antitank weapons. For this reason the EW also was conducted primarily for purposes of suppressing and protecting the RES of aircraft, air defense troops and tank units and subunits. The jamming of air defense electronics systems reduced air force losses and disruption of radio communications for control of tank units increased the number of tanks disabled by antitank guided missiles [ATGM's].⁵

Some 30 percent of attack aircraft in the Israeli Air Force were equipped with American electronic jammers and some of them were equipped with the Shrike antiradar missiles for reconnoitering and suppressing RES. Many F-4 aircraft had radar illumination warning gear and the ALQ-71 and ALQ-87

radar jammers, while the A-4 aircraft had warning gear, the ALQ-19 and ALQ-100 radar jammers and the ALQ-55 communications jammers.

By October 1973 the Israeli Air Force had 68 of the 400 warplanes equipped with communications jamming facilities. In addition, during the war Israel received in addition Shrike and Standard ARM missiles, automatic gear for jettisoning chaff packets and infrared decoys, as well as the ALQ-119 pod jammers for the F-4 aircraft. Several Phantoms were refitted as EW aircraft by suspending on pylons four pods with two radio jammers and installing devices for launching Shrike missiles, as well as automatic equipment for dropping chaff and infrared decoys.⁶

At the beginning of combat operations chiefly passive radio jamming was performed for neutralizing radars by aircraft using the ALE-29 automatic equipment loaded with 32 pyrotechnic cartridges with chaff. In addition, aerial bombs with radio chaff were used, supplied to Israel by the Americans. In order to increase the capabilities for creating passive radio jamming during the war, 20 F-4 aircraft were fitted with the new ALE-38 automatic electromechanical equipment loaded with chaff packets made of fiberglass or aluminum foil. Israeli aircraft employed luminous decoy bombs to divert SAM's with an infrared [IR] homing head. But according to foreign military experts, the homing heads of Strela-type SAM's did not react to the emissions of these bombs, since their spectrum did not coincide with that of the gas jets of the aircraft engines, and they hit the targets. The strength of emissions of the IR decoys subsequently was increased. During the first week of combat operations, the foreign press reported that Arab air defense weapons shot down some 25 percent of Israel's A-4, F-4, Mirage and Super-Mystere warplanes.

After suffering telling losses from air defense weapons, the Israeli Air Force directed its main efforts to the fight against radars, control posts and air defense weapons and also shifted from mass strikes by groups of 24-30 aircraft to echeloned operations by small groups of 4-8 aircraft. Its operating tactics also underwent a change. The aircraft usually would fly at extremely low altitude (20-25 m). On approaching the zone of coverage of the Arab air defense weapons, they would deliver attacks with antiradar missiles from a distance of 20-25 km from the radars, then bomb radar and SAM positions, destroy fighter aviation on airfields and only after this shift to support of the ground forces. Strikes were delivered against SAM's with the simultaneous use of communications jamming, performance of an evasive maneuver and action by diversionary groups of aircraft. Communications jamming usually was accomplished from aircraft and helicopters flying over territory captured by the Israeli aggressors. The ALE-29 automatic equipment on Skyhawk aircraft would fire IR decoys with luminous tracers to divert SAM's with IR homing heads away from attacking aircraft. Instances were noted of the employment of American AQM-34H unmanned, controlled EW aircraft, which would approach the zone of SAM coverage 1.5-1 minute before the arrival of attack groups of aircraft, drop chaff packets and switch on active communications jammers. Their flight was controlled by radio command or by programs placed in their on-board program devices.

After mission accomplishment the aircraft would head to specific areas, where they would land by parachute or would be picked up in the air by helicopters.⁷ Aircraft would conduct demonstrations simultaneously with the employment of EW facilities.

The Israeli Air Force prepared carefully for using EW facilities. Reconnaissance of strike objectives was accomplished by manned and unmanned aircraft approximately an hour before the take-off of the attack group. During preparations an analysis was made of air defense weapons and fighter and air defense weapons guidance systems in the vicinity of the strike objective. Then vulnerable elements were identified in the enemy air defense control systems and recommendations were developed for their electronic suppression and destruction. A planning table was drawn up based on these data. It defined the procedure for employing EW capabilities for the entire flight of the attack group and outlined the approach route to the target and operating procedures in delivering the attack.

Foreign military observers who analyzed the combat activities of the Israeli Air Force note that while it was able to deliver surprise strikes against airfields, air defense weapons, control posts, communications centers and radar stations in the 1967 aggression and thus ensure supremacy in the air and on the ground, it no longer succeeded in doing this in 1973. The SAM and artillery systems guided with the help of modern RES demonstrated particularly high results in the battle against Israeli aircraft. According to estimates of foreign military experts, 90 percent of the 110 enemy aircraft shot down by the Arabs' air defense weapons in the first days of the war were destroyed by SAM's and AAA and only 10 percent were shot down in aerial combat.

In the opinion of foreign military specialists, the reasons for the poor effectiveness in suppressing RES were the small amount of EW facilities used at the beginning of combat operations and the narrow frequency band in which the jammers operated.⁹ In addition, Israel allegedly did not have jamming capabilities against new RES for controlling SAM's, which inflicted particularly telling losses on its aircraft. The effectiveness of communications jamming performed by the Israeli Air Force was reduced by the fact that several types of RES were employed simultaneously in the mixed groupings of air defense troops of Egypt and Syria. This hindered their suppression using the communications jamming gear of aircraft, which had a limited range of frequencies.¹⁰

Taking account of the heightened combat capabilities of air defense weapons, foreign military specialists believe that there must be continued use, along with EW facilities of attack aircraft, of special manned and unmanned EW aircraft capable of destroying and suppressing electronic facilities by jamming in order for tactical aviation to overcome air defenses.

At the beginning of combat operations Israel's intelligence was not able to identify the new operating frequencies of Arab radars, which previously had not been noted in operation. The American APR-25, APR-26, APR-27 and

other radio receivers were not able to detect the operation of individual Arab radars and warn aircraft crews of radar illumination and the guidance of SAM's against the aircraft.

According to an admission of the foreign military press, the insufficient operating range of Shrike missiles forced Israeli pilots to enter the coverage zone of SAM's in order to launch them. The Arab crews of the SAM guidance radars took steps to combat the antiradar missiles. In addition, the low effectiveness of communications jamming facilities of the Israeli aircraft is explained by improper planning, insufficient coordination, clumsy operating tactics of the aircraft, the personnel's poor knowledge of the EW gear and also by the fact that some pilots were not switching on jammers at the beginning of the war, fearing to attract missiles and fighters by their emissions.

EW was conducted in the Israeli Navy using passive communications jamming facilities and by launching decoys, which supported strikes by Gabriel missiles from guided missile boats against surface ships and shore installations of the Arab countries. They operated primarily at night in coordination with helicopters which simulated guided missile boats and with aircraft which delivered strikes against shore radars and artillery positions.¹¹ For example, that is how several Israeli guided missile boats delivered strikes against Syrian naval ships in the vicinity of Latakia under cover of passive jamming in a sea battle on the night of 6/7 October 1973, destroying three guided missile boats and one minesweeper. On the night of 8/9 October six Israeli guided missile boats employed passive jamming in combination with maneuver in a battle against four Egyptian guided missile boats in the vicinity of Damietta (the Nile delta) and destroyed three Egyptian boats, losing but one.¹²

Ground-based EW subunits equipped basically with American communications intelligence and communications jamming gear also functioned in the Israeli Army. They were deployed on the Sinai Peninsula and the Golan Heights within the tactical zone. The facilities of these subunits detected the operation of ground-based and aircraft RES in the frequency range from 2,000 to 16,000 MHz, determined the location of radar stations, control posts and SAM positions and performed communications jamming. They used the jamming in an attempt to disrupt control of aircraft and ground units of the Arab countries just as was done in June 1967.

In addition to the aircraft, shipboard and ground-based EW facilities, the Israelis employed expendable communications jammers. In addition, when the Israeli aggressors moved to the west bank of the Suez Canal their tank subunits and reconnaissance-sabotage groups destroyed SAM systems and radars of the Egyptian air defense troops.

As asserted by the foreign press,¹³ after the mass use of EW facilities the Israeli Air Force's losses were reduced threefold at the end of the October war of 1973.

During the war the Israeli military command organized intensive reconnaissance of RES by manned and unmanned aircraft, helicopters and boats as well as by reconnaissance-sabotage detachments. The United States helped Israel collect intelligence, using the SR-71 aircraft and the "Big Bird" ISZ [artificial earth satellite] for this purpose. Results of aerospace reconnaissance were made known to the general staff in Tel Aviv. For example, on 8 June 1967 Israeli aircraft erroneously attacked the American intelligence ship "Liberty" of the American Sixth Fleet near the shores of Egypt. She was outfitted with gear for communications intercept and for recording and analyzing radio signals.¹⁴ On an assignment from the U.S. National Security Agency (NSA), the ship was engaged in communications intercept and the recording and analysis of RES signals and clear-text and encoded radio conversations being conducted on the battlefield by troops of the Arab states and the Israeli aggressors. The intercepted signals and radio messages were being decoded and transmitted to American embassies in Near East countries, to the U.S. NSA and to the Israeli side. In addition, coded false orders in Arabic often would be transmitted from the "Liberty" to disrupt command and control of Arab troops for military unit commanders. For example, that was the case in the vicinity of El Arish, where the Egyptians were attempting to organize defenses. Obeying false orders for a withdrawal, which were later found to have come from the "Liberty," Egyptian troops abandoned the city without resistance.¹⁵

U.S. aerospace espionage has continued even after cessation of military operations in the Near East.

Employing new high-quality equipment sent by the Soviet Union, the Egyptian and Syrian armed forces conducted EW in order to disorganize the enemy's control and protect their own RES against suppression by communications jamming and destruction by homing missiles. To disrupt enemy control they would deliver strikes against control posts and RES and would set up active and passive communications jamming. For example, on 6 October the Egyptian Air Force delivered strikes against control posts and EW centers on the Sinai Peninsula and against the RES for control of aircraft located at airfields of Bir Gifgaf, El Arish, Ras Nasrani and Bir Tamada.¹⁶ As a result, the Israeli command post in the Sinai, an EW center and several Hawk SAM systems were disabled. The fact that control of Israeli troops was transferred to the command post at El Arish and the jamming of Egyptian communications and radar facilities ceased can serve as proof of the effectiveness of these strikes.

To destroy air defense radars on the Sinai Peninsula, the Egyptian Air Force employed antiradar missiles, which disabled several radars. Arab troops employed reconnaissance-sabotage detachments to destroy control posts and RES. For example, on 6 October Syrian commando detachments seized and destroyed three communications intelligence, communications jamming and control centers in the vicinity of Hermon, Tell Obunada and Tell Faras. As a result the Israelis were deprived of the capability of conducting surveillance of Syrian troops and jamming the communications of Syrian Armed Forces.

Communications jamming subunits of Egypt and Syria disrupted radio communications controlling aircraft and ground forces and suppressed the operation of radio navigation systems and RES for guiding the Hawk SAM's. For example, on 6 October 1973 79 Syrian aircraft delivered a mass strike against Israeli troops in the vicinity of the Golan Heights under cover of active and passive communications jamming performed by aircraft and ground-based stations, losing only one aircraft. According to the foreign press, the communications jamming was so effective that the Israeli SAM systems and fighter aircraft were not able to operate against the Syrian aircraft.¹⁷ Meanwhile, coordination between communications jamming subunits and communications intelligence was not organized in the Egyptian Army because of the negligence and mismanagement of the military leaders. Their work was not coordinated with troop combat operations. Therefore the communications jamming did not always disrupt control of the enemy's aircraft and ground forces units and combined units.

To conceal their electronic facilities, the Syrians and Egyptians would maneuver frequencies and carry out other measures. They would defend against communications jamming by using several types of RES in the air defense systems which operated in different modes and on different frequencies. They would conduct organizational measures and would employ protective gear. All these measures hindered the Israeli Air Force in detecting and suppressing air defense RES and required the more intensive use of EW facilities.

Visual observation and communications intelligence, which detected enemy aircraft according to the RES operating aboard them, also provided valuable information on the air enemy in suppressing air defense radars by jamming.

Thus, EW in the Arab-Israeli wars was distinguished by a high intensity and conducted with the use of a large amount of EW facilities, means of destruction by fire, and diverse electronic equipment in the air force, air defense, navy and ground forces. It has been said abroad that the basic lesson of the Arab-Israeli wars of 1967-1973 was the fact that the role and capabilities of EW both in offensive and defensive operations has increased considerably and continues to rise in modern warfare.¹⁸ After conclusion of the wars the conduct of EW was analyzed in many capitalist states. Special attention is given to an analysis of the operating frequencies, duration, recurrence frequency, structure and other parameters of radio signals, knowledge of which is needed in perfecting the equipment, methods and tactics of EW. Its results have shown that some of the EW capabilities being employed were of insufficient effectiveness under combat conditions.

For this reason the directions of research and development of EW technology have changed somewhat abroad. Instead of individual capabilities they have begun to develop systems, which include communications intelligence gear, gear for active and passive jamming of RES, antiradar missiles and radar and IR decoys. Aircraft and helicopters of tactical, army and deck-based aviation are being fitted with EW facilities. As the experience of local wars indicated, this considerably increases their effectiveness in

performing combat missions. As a result of the fact that there were high losses of manned aircraft in local wars, the development of unmanned EW aircraft has stepped up. Expendable communications jammers, which demonstrated sufficiently high effectiveness, are being improved intensively. Countries participating in the aggressive NATO bloc have begun work of improving gear for the detection and warning of illumination of combat equipment by electro-optical means, for improving methods of reducing the military equipment's own emissions, and improving means of electro-optical suppression. There is an improvement taking place in the quality of homing weapons in which homing warheads can be targeted not only on radio emissions of RES, but also on infrared (thermal) emissions of military equipment.

EW tactics are being improved in numerous exercises of member states of the aggressive North Atlantic Alliance in Western Europe with consideration of the experience of the Arab-Israeli wars and use of the latest EW facilities and electronic technology intended for European theaters of military operations.¹³

FOOTNOTES

1. ARMY, No 8, 1967, p 28.
2. AVIATION WEEK AND SPACE TECHNOLOGY, 29 October 1973, Vol. 181, p 16.
3. AFRICANE NOUVELLE [sic], Paris, No 7, 1967.
4. MILITARY REVIEW, No 9, 1967, p 59.
5. AVIATION WEEK AND SPACE TECHNOLOGY, 5 November 1973, Vol. 99, No 19, p 18.
6. Ibid.
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9. Ibid., 29 October 1973, p 23.
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17. NEWSWEEK, 22 October 1973, pp 10-18.
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MILITARY SCHOOLS: DEVELOPMENT DURING 1929-1937

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[Article, published under the heading "Scientific Information," by Doctor of Historical Sciences Col (Ret) A. Iovlev, and Candidate of Historical Sciences Lt Col (Res) A. Cheremnykh: "The Development of Military Educational Institutions in 1929-1937"*]

[Text] The technical refitting of the Red Army and Navy conducted by the Communist Party and Soviet government during the 1st and 2d five-year plans (1929-1937) placed new demands on the training of command cadres and on the work of military educational institutions. The VKP(b) [All-Union Communist Party (Bolshevik)] Central Committee decrees entitled "On the Command and Political Personnel of the RKKA [Workers' and Peasants' Red Army], adopted in 1929 and 1931,¹ stated that a deciding condition for a further increase in combat effectiveness of the Army is an increase in the commanders' political and military-technical knowledge, their mastery of new combat equipment and complex forms of modern warfare, the development in them of high volitional qualities, initiative, persistence and sharpness, and their indoctrination in a spirit of utter dedication to the cause of socialism.

New missions also were assigned for military educational institutions. The VKP(b) Central Committee decree dated 5 June 1931 pointed out: "...Military schools, advanced courses and academies must become truly the leading centers for the entire Army in combat and political training, in the mastery of equipment and in military science work and they must fully support the Army's need for command personnel highly qualified both in the military-technical and the political sense."² The VKP(b) Central Committee demanded that military educational institutions be strengthened with qualified instructors, that their physical facilities be improved, that they be outfitted with the latest combat equipment and that the best cadres of party and Komsomol members with an education of at least seven grades be chosen for military schools.

*This article is a continuation of a series of articles on the subject of the development and improvement of military educational institutions of the Red Army (Cf: VOYENNO-ISTORICHESKIY ZHURNAL, No 9, 1974; No 2, 1976).

In conformity with missions advanced by the Communist Party for military educational institutions, the USSR Revvoyensovet [Revolutionary Military Council] conducted organizational restructuring. One of the directions of this realignment consisted of the creation of new military schools and academies and the re-forming of some of those in existence. For example, during the years of the First Five-Year Plan, armored military schools were formed on the basis of infantry and cavalry schools. While in 1928 there was just one course of mechanical traction functioning for 65 students, by early 1933 there already were eight armored schools and advanced courses where 6,200 persons were training.³ The number of secondary military educational institutions rose from 59 to 75 in the period from 1928 through 1937, including from 6 to 11 artillery schools, from 8 to 18 aviation schools and from 2 to 7 naval schools.

In fulfilling a decision by the Party Central Committee, the USSR Revvoyensovet developed a plan for expanding the network of higher military educational institutions, which was approved by the Soviet government. On 21 May 1932 the Defense Commission of the Council of People's Commissars adopted the following decision based on a report by the Narkomvoenmor [People's Commissariat for the Army and Navy]:

"The Defense Commission deems proper and timely the measures of the Union RVS [Revolutionary Military Council] for personnel training:

"a. Establishment of special RKKA academies from the Military-Technical Academy: an Academy of Motorization and Mechanization; a Military Chemical Academy; a Military Engineering Academy; an Artillery Academy; and an Academy of Communications and Electrical Engineering;

"b. Organization of a Military Transportation Academy for training personnel of the NKVM [People's Commissariat for the Army and Navy], NKPS [People's Commissariat of Railroads], NKVod [People's Commissariat of Water Transportation], and Tsudotrans [Central Directorate of Highways, Dirt Roads and Automobile Transportation]."⁴

This same decision envisaged an expansion of the combined-arms Frunze Military Academy (by 1½ times) and its reorganization in conformity with the missions for technical refitting of the RKKA, reorganization of the Military Political Academy and a doubling of recruitment for it (from 550 to 1,200 persons).

The Party Central Committee and Soviet government gave the Army enormous assistance in setting up new military academies and adjusting the training process in them. Three higher civilian educational institutions were transferred to the Armed Forces for the formation of new military higher educational institutions on the basis of faculties and departments of the Military-Technical Academy: the Moscow Auto-Tractor Institute, the Higher Engineering Construction School and the 2d Branch of the Moscow Chemical-Technological Institute with their training buildings and housing. As a result of these measures the following were formed in 1932: the Military Academy of Motorization and Mechanization, the Military Chemical Academy and

the Military Engineering Academy. There was a mobilization of students fit for military service (some 4,500) and of faculty personnel for manning them.

In June of that same year the USSR Revvoyensovet formed the Artillery Academy and Electrical Engineering Academy on the basis of the corresponding faculties of the Military Technical Academy. The Military Transportation Academy also began functioning in the fall of 1932. Necessary conditions thus were created for fulfilling the assignment of the party and government to prepare the necessary number of military-technical cadres for the Red Army in the shortest possible time.

In 1934 the proportion of students of military-technical academies already comprised more than 70 percent of the total number of students in military higher educational institutions, which by that time had increased almost fivefold.⁵

With the establishment of the Military Administrative Academy in 1935 and establishment of the General Staff Academy in the following year (on the basis of a special faculty of the Frunze Academy), the number of higher military educational institutions by the end of the Second Five-Year Plan consisted of 13 academies, 1 institute and 5 military faculties at civilian universities.⁶

Correspondence-course and evening academies were formed in late 1929 in order to accelerate the training of command personnel with a higher education. In 1933 there already were 2,161 supervisory personnel training in them.⁷

The number of advanced command courses was not constant in different stages. The number of these courses rose in the initial period of technical refitting of the troops, when the need arose for retraining a considerable number of commanders for working with new equipment or for requalifying them. For example, in 1930 it reached 18 (as opposed to 5 in 1928), and 73 percent of the trainees were being prepared for the technical combat arms. The establishment of new military schools reduced the need for requalifying command personnel, and so the advance courses, the number of which had dropped to 10 by 1933,⁸ primarily began to handle the retraining of commanders recommended for advancement. There were also nine courses functioning for retraining reserve commanders. The number of the latter rose to 22 in 1937.

Along with the growth of military educational institutions, there was an increase in the number of cadets and students training therein. Beginning in 1931 an additional one battalion was introduced in almost every artillery school and one or two companies or battalions in technical schools. Artillery, tank, engineering, chemical and even aviation subunits were included as part of infantry schools. The total number of cadets rose from 44,000 in 1932 to 63,440 in late 1936, and the number of academy students rose from 3,198 to 11,000 persons during the period from 1928 through 1936.⁹

The class to which the youth belonged and party membership were considered in selecting them for military schools. Much attention was given to

Increasing the cadets' level of general educational training. In response to a petition of the USSR Revvoyensovet, the VKP(b) Central Committee held a number of special recruitments for military schools in the period 1931-1936. There were 7,000 party and Komsomol members up to 25 years of age mobilized in 1931 and 10,000 in 1932,¹⁰ primarily from workers who as a rule had served their time in the Army and had a general education to the extent of an incomplete secondary school or secondary school. They were used to man technical schools (aviation, tank and artillery) and some other military-technical schools. The 10,000 party members of the 1932 special recruitment were sent as follows: 3,600 to aviation schools, 2,500 to armored schools, 1,820 to artillery schools, 900 to naval schools as well as to chemical, engineering and signal schools.¹¹

The social-party composition of trainees improved and the training of command cadres accelerated as a result of the party mobilizations, since cadets of the special recruitment were trained under an abbreviated program for 1.5-2 years.

Military schools also were filled with young people who had come through military commissariats to military units. Working and peasant youth and party and Komsomol members primarily went into the military schools thanks to the active participation in recruitment work by party, Komsomol and trade union organizations as well as the command element and political entities of combined units and units of the Army and Navy, which is indicated by the following table, compiled from materials of ground forces schools (in percentages).¹²

Social and party composition of persons accepted for military schools	Years				
	1928	1930	1932	1934	1936
Workers	56.0	59.6	63.8	60.0	21.7
Peasants	34.4	34.2	32.4	28.0	7.2
Others	9.6	6.2	3.8	12.0	71.1
Party members	24.5	30.2	70.8	12.0	0.2
Komsomol members	52.6	49.5	24.3	82.0	55.0

These figures indicate that by the end of the period in question there was a certain reduction in the worker and peasant layer. This was explained on the one hand by the fact that along with workers and peasants military schools were accepting representatives of their own Soviet intelligentsia developed during the years of Soviet power and, on the other hand, and most important, by the fact that graduates of school of general education began

to enter them. For example, the category of pupils comprised 55.2 percent of the total number of those accepted in 1936. The reduction in number of party members among cadets at this time also was the result of the cessation of acceptance into the party during the purge of VKP(b) ranks as well as the period of check and exchange of party documents conducted in the period 1933-1936. In addition, over 55 percent of the total number of persons accepted in military schools consisted of young people in the ages of 17 and 18.

The low level of general educational training of the youth entering military schools hindered the work of military educational institutions. In 1928 only 18.8 percent of the first-year students had an education of seven grades or more, in 1930 it was 21.8 percent and in 1932 it was 24.3 percent.¹³ Because of this the cadets were not able to master that knowledge needed by commanders. Many of them were dismissed for lack of progress. The Directorate of Military Educational Institutions was forced to set aside up to 25-30 percent of the training time for the study of general educational disciplines.

On instructions of the VKP(b) Central Committee, agencies of the Narkompros [People's Commissariat of Education] set up 6-8 month preparatory courses for those desiring to enter military schools. In 1929 there were 25 percent who entered military schools after their completion, and in 1930 they comprised 31 percent.

But the courses only partially solved the problem which had arisen. Another way was to lengthen cadet training courses. Thus, a USSR RVS decree dated 29 May 1929 increased the period of training by six months, but this step led to a slowdown in rates of training for command cadres. Therefore in subsequent years the training time in military schools varied from 4 to 2.5 years, which also created certain difficulties in the work of military educational institutions.

The general educational training of cadets rose in 1936, facilitated by the introduction of new procedures for acceptance to military schools in addition to the overall increase in literacy of the population in the country. Entrance exams were shifted from October to August. Young people had an opportunity to enter military educational institutions immediately after completion of school. Recruitment was performed not only by military commissariats and military units, but also by the schools themselves. As a result of steps taken in 1936 young people came into the military schools with 73.5 percent having an education of eight grades or more and only 26.5 percent had a seventh grade education. In 1937 the number of persons accepted for the first course with an education of at least eight grades comprised 92 percent of the total number of arrivals.

The laboratory-team method of classes which envisaged the pupils' collective responsibility for their training and a determination of the grade on the basis of written group projects, exercises and presentations by briefers assigned from a team began to be abolished in the period in question. All this led to a degradation in the role of the teacher and an irresponsible attitude by trainees toward classes.

Guided by instructions of the VKP(b) Central Committee, the TsIK [Central Executive Committee] and the USSR SNK [Council of People's Commissars], the USSR Revvoyensoviet implemented a number of measures to improve training in military educational institutions. By an order dated 9 November 1932 and a USSR RVS decree dated 4 December entitled "On the Organization of Training Work in Military Academies of the RKKA," various forms of group accounts were abolished and a single record of each student's progress was established with grades of "outstanding," "good," "satisfactory" and "poor." Transfer exams were introduced at the end of the training year and state exams on completion of the military educational institution. Graduates of military-technical academies had to defend diploma projects. Beginning in 1936 the transfer exams began to be given by commissions appointed by the chief of the military school or academy, and state exams by commissions with a composition determined by order of the NKO [People's Commissariat of Defense].

But despite steps taken to improve the work both of civilian and military higher educational institutions, serious shortcomings still continued there. They were pointed out in a USSR SNK and VKP(b) Central Committee decree dated 23 June 1936, entitled "On the Work of Higher Educational Institutions and on Management of the Higher School,"¹⁴ which noted in particular that curricula suffered from too many subjects and were subject to changes each year. There were no standard textbooks for a number of the most important disciplines.

On the basis of the aforementioned decree, the People's Commissar of Defense issued a special order clearly defining the profiles and purpose of training in all academies and in military faculties. Steps were taken to eliminate the multiplicity of subjects and strict procedures were established for organizing the training process.

Considerably more time began to be devoted in the updated curricula of the military-technical academies to the study of general-technical and special disciplines, to students' OJT among the troops and to production practice. The faculty was able to visit the troops more often and participate in maneuvers and exercises, which contributed to enrichment of the training process with the experience of the personnel's combat and political training.

Political entities and party and Komsomol organizations played an active part in improving military educational institutions. They were the conductors of Communist Party policy among personnel. They indoctrinated the personnel in a spirit of dedication to the cause of socialism, love for the socialist Motherland, and irreconcilability toward its enemies. Their work was aimed at ensuring the training of skilled command cadres possessing a strong will, who had initiative, who mastered combat equipment to perfection, who were capable of controlling subunits, units and combined units in a difficult combat situation and who were able to train and indoctrinate subordinates.

The period of technical refitting of the Red Army and Navy thus was characterized by a further expansion in the network of military educational

institutions. Their organizational restructuring permitted a significant increase in the training of command-political and engineering-technical personnel for ground forces and naval forces. Reorganization of training work contributed to an increase in the quality of cadet and student training.

Military cadres, who at that time were trained in military academies, schools and advanced courses, coped successfully with the task of training and indoctrinating Soviet soldiers, showed high proficiency in command and control and proved their dedication to the Communist Party and socialist Motherland in the Great Patriotic War.

FOOTNOTES

1. Cf: "KPSS v rezolyutsiyakh i resheniyakh s"yezdov, konferentsiy i Plenumov TsK" [The CPSU in Resolutions and Decisions of Congresses, Conferences and Central Committee Plenums], 8th ed., supplemented and revised, Vol. 4, Moscow, Politizdat, 1970, pp 176-179, 521-524.
2. Ibid., pp 522-523.
3. TsGASA [Central State Archives of the Soviet Army], stack 31811, list 12, file 219, sheet 6.
4. TsAMO SSSR [USSR Ministry of Defense Central Archives], stack 33, list 1656, file 10, sheet 81.
5. Ibid., stack 54, list 27060, file 2, sheet 3.
6. "Istoriya Kommunisticheskoy partii Sovetskogo Soyuza" [History of the CPSU], Vol. 4, Book 2, Moscow, Politizdat, 1971, p 406.
7. TsAMO, stack 33, list 27789, file 1, sheet 167.
8. TsGASA, stack 62, list 2, file 770, sheet 2.
9. Cf: "Istoriya vtoroy mirovoy voyny" [History of World War II], Vol. 1, Voenizdat, 1973, p 266; Vol. 2, p 204.
10. D. A. Voropayev and A. M. Iovlev, "Bor'ba KPSS za sozdaniye voyennykh kadrov" [The CPSU's Struggle for Creating Military Cadres], Voenizdat, 1960, pp 131-132.
11. TsAMO, stack 33, list 1647, file 6, sheet 16. The data cited indicate that the article by B. Tel'pukhovskiy (VOPROSY ISTORII KPSS, No 8, 1976, p 93) states incorrectly that the special recruitment of party members consisted only of 1,000 persons.

12. Material used for compiling the table was from the newspapers PRAVDA, 24 November 1928 and KRASNAYA ZVEZDA, 19 December 1930, as well as TsGASA, stack 4, list 1, file 1120, sheet 4; file 1370, sheet 1; stack 62, list 2, file 491, sheet 17; file 502, sheet 35.
13. TsGASA, stack 4, list 1, file 1120, sheet 4; file 1370, sheet 1.
14. "KPSS v rezolyutsiyakh ...," Vol. 5, pp 270-281.

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CENTRAL ARMY ARCHIVES: 60TH ANNIVERSARY ARTICLE

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 7, 1980 signed to press
25 Jun 80 pp 76-78

[Article, published under the heading "Scientific Information," by
T. Karyayeva, deputy director of the TsGASA (Central State Archives of the
Soviet Army), honored cultural worker of the RSFSR: "The Central State
Archives of the Soviet Army are 60 Years Old"; passages enclosed in slant-
lines printed in boldface]

[Text] The development of military archives on a scientific basis began in
our country after the Victory of October. According to Lenin's decree dated
1 June 1918 entitled "On Reorganization and Centralization of Archival
Work...", a naval section was established as part of the RSFSR United State
Archive Holdings for the collection and safekeeping of military documentary
materials. The decree on archives and matters of disbanding the previous
army, signed by Lenin on 27 March 1919, already directed special attention
to the storage of Red Army documents, which were to be placed under guard of
military commissars in outlying areas. Attaching great importance to this
matter, Vladimir Il'ich wrote the deputy manager of the Central Archive
Directorate (TsAU) in Kazan' on 6 April 1920:

"Comrade Adoratekiy . . .

"3. Can you collect material for the /history of the Civil War and the
history of the Soviet Republic?/

"Can these materials be collected in Kazan' in general? . . .

"Can I help obtain what is missing?"¹

By Order No 1347 dated 19 July 1920, the Republic Revvoyensovet [Revolu-
tionary Military Council] obligated military commissars in outlying areas

1. V. I. Lenin, "Polnoye sobraniye sochineniy" [Complete Collected Works],
LI, 176.

"to submit to the Red Army Archive under the Military-Historical Commission . . . all files of the military department and field staffs." The day this order was signed is considered the date of establishment of the Central State Archives of the Soviet Army (TsGASA).

Documents from the fronts and from units arrived in bags, bales, boxes and unpackaged, turned in by the pood, piled and stacked in areas unadapted for storage, often in barns and warehouses. Despite unfavorable conditions, the small Archive staff placed the material in order. A description of files was made on small cards and recordkeeping and storage was done not according to holdings but by the gross numbering given the files as they arrived. But in 1925 104 tons of documents remained unexamined in the Archive.

The Red Army Archive was included in the network of RSFSR scientific research establishments in May 1932 and was transformed into the Red Army Central Archive (TsAKA) by decree of the TsIK [Central Executive Committee] and SNK [Council of People's Commissars] dated 7 April of the following year. It soon was given part of a building on Bol'shaya Pirogovskaya ulitsa (Building 17), where it is located to this date (see photo) [photo not reproduced].

Assembled in the Archive's repositories are documents for 1917-1940 of supreme entities of the RKKA [Workers' and Peasants' Red Army] Military Directorate, military districts, fronts, armies, divisions, military educational institutions and so on. Material of the holdings reflect the leading role of Lenin and the Communist Party in military organizational development and in organizing the defense of the Soviet state; the history of the establishment and strengthening of the USSR Armed Forces and of our people's armed struggle against internal counterrevolution and military intervention; they reveal the heroism of Soviet soldiers; and they show the origin and development of new technical arms and of Soviet military science and conduct of the military reform of 1924-1925. There are over 1.7 million files assembled, placed in order and subjected to scientific-technical processing in the Archive at the present time.

In conformity with Lenin's decree dated 1 June, archives were set up from the very beginning for their extensive and comprehensive use. The Military Historical Commission marked the beginning of the scientific practical use of TsAKA documents in working on the history of the Civil War. During the 1920's and 1930's the study of this war's experience was being done by the well-known military workers and military leaders V. A. Antonov-Ovseyenko, I. I. Vatselis, G. D. Gay, A. I. Yegorov, V. N. Yegor'yev, S. S. Kamenev, N. Ye. Kakurin, L. L. Klyuyev, V. S. Lazarevich, D. N. Naderzhnyy, A. A. Svechin, N. A. Suleyman, V. K. Triandafillov, M. N. Tukhachevskiy, D. A. Furmanov, B. M. Shaposhnikov, R. F. Eydeman, G. Kh. Eykhe and many others. Over 900 different works were published in the first ten years from Archive materials, including the three-volume works "Grazhdanskaya voyna. 1918--1921 gg." [Civil War of 1918-1921]. The third volume is of special interest. It is devoted to the strategy and operational art of the Red Army.

In connection with a VKP(b) Central Committee decree on publishing a history of the Civil War in 1931, Archive workers began a topical processing of holdings and identification of necessary materials. As a result of many years of work, which continued until 1939, they compiled and transferred to the IGV [expansion unknown] editorial offices a card file on 60,000 documents. Many efforts also were spent locating documents on prominent revolutionary figures, military leaders and war heroes. In 1938 the card file of names consisted of more than 22,000 cards.

On 29 March 1941 the USSR SNK approved a new statute on the USSR State Archive Holdings and a network of state archives. The Red Army Central Archive was designated a state archive (TsGAKA [Central State Archive of the Red Army]). The new statute considerably expanded the tasks and rights of archival establishments and clarified the profiles of central and local state archives. But its requirements were not implemented as the war began. Materials of the TsGAKA were evacuated into the country's depths.

After its return to Moscow in 1944, the Archive's chief tasks became to place the holdings in order and to establish and improve the scientific reference apparatus. The painstaking and responsible work continued in identifying documents on Lenin subjects. These searches in the Archive began in 1925, immediately after the 13th party congress, which called on party members in all organizations to assist the Lenin Institute in every possible way to collect material on the life and work of the leader. This work was renewed in TsGAKA after the war in connection with preparation for the 4th edition of the "Sobraniye sochineniy V. I. Lenina" [Collection of Lenin's Works]. They were stepped up in particular in 1961-1965 during preparation of a multivolume biographical chronicle of Lenin's life and works. A total of 764 documents including 255 with Il'ich's autograph, were found in the Archive and passed over to the IML [Institute of Marxism-Leninism] attached to the CPSU Central Committee. The work of locating documents of the great leader continues even now.

The flow of queries to TsGAKA sharply rose in the postwar period, which greatly increased the volume of reference works. This was caused by a reduction in the size of the Soviet Army, publication of the Pension Law in 1956 and the adoption of party decisions and Soviet government decrees on issuing awards and supplementary benefits to war participants. Archive workers responded to a total of over 2.3 million workers' requests in 60 years. Hundreds of letters are received by the Archive from grateful applicants. For example: "...It is a great celebration for me today. I received your Archive certificate and my party seniority was restored"; "You are doing a great and useful job . . . not only I, but thousands of people are grateful to you."

Each year the TsGAKA² fills 1,500-2,000 topical requests of party and soviet entities, scientific establishments, museums, folklore organizations,

2. In 1958 the archives began to be called the Central State Archive of the Soviet Army.

schools and military units. The interest in documents and accordingly the flow of requests rises sharply as we approach jubilees of the Great October and the Soviet Army. For example, in 1967 4,725 requests were filled and 4,380 in 1968.

The Archive carries out scheduled scientific archive research and methods work, the main purpose of which is scientific methods support of all research being conducted, a study of the specific features of materials, and scientific organization of document storage.

TsGASA gives much attention to the preparation of documents for publication. It increased in particular after publication of the USSR Council of Ministers decree dated 7 February 1956 entitled "On Measures for Regulating the Storage Conditions and for Better Use of Archival Materials in Ministries and Departments." The TsGASA, jointly with scientific establishments, prepared and published over 30 collections of documents and, for the 100th anniversary of Lenin's birth, two collections of letters from fighting men and commanders: "To the Leader, General and Friend" and "From the Depths of Our Hearts."

The Archive's most important projects on Civil War history are the series of collections "Directives of the Red Army High Command (1917-1920)" and "Directives of Red Army Front Commands (1917-1922)", volumes 1-4, published jointly with the USSR Ministry of Defense Institute of Military History in 1969-1978 and including more than 5,000 archival documents with an overall total of 255 printed sheets. These collections clearly show the many-sided work of Lenin and the Party Central Committee in managing armed warfare.

At the present time the history of the Civil War and military organizational development numbers more than a single hundred volumes of studies written using TsGASA materials. Among them should be mentioned the five-volume publication "Istoriya grazhdanskoy voyny v SSSR" [History of Civil War in the USSR], a multivolume history of the CPSU, the work entitled "50 let Vooruzhennykh Sil SSSR" [Fifty Years of the USSR Armed Forces], and works by well-known Civil War historians Academician I. I. Mints, N. N. Azovtsev, Yu. I. Korablev, G. V. Kuz'min, N. F. Kuz'min, S. V. Lipitskiy, S. F. Nayda, V. D. Polikarpov, L. M. Spirin, S. N. Shishkin and others.

During its 60 years of active work, the collective in which many enthusiasts and veterans have worked for 20 or 30 years put in order and ensured the safekeeping and accessibility of materials, and created a rather well-developed system of a scientific reference apparatus. Enormous credit for this goes to workers V. V. Dushen'kin, A. F. Gorlenko, A. M. Ivanov, A. P. Kladt, K. I. Lyubavskaya and others who worked in the Archive in past years. At the present time the best traditions of the TsGASA are continued by leading specialists--L. P. Borodina, N. I. Deyeva, B. G. Drobot, O. D. Grinchenko, M. N. Il'ina, L. Ye. Marovannaya, S. P. Nosov, Z. A. Nurgalif, Z. F. Pavlova, Ye. V. Sakharova, G. A. Smirnova, L. A. Shishkova and D. N. Shapiro and stack custodians A. T. Beschvertnaya and L. P. Gerasimova.

In celebrating its jubilee, the TsGASA collective intends to continue to take an active part in comprehensive use of the documentary riches in the interests of the socialist homeland.

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BOOK REVIEW: ESSAYS ON NOTED WORK HEROES

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 7, 1980 signed to press
25 Jun 80 pp 79-80

[Review, published under the heading "Critique and Bibliography," by S. Sergeyev: "For the Good of the Motherland"]

[Text] An interesting book has been published on famous people of our Motherland--three-time and two-time Heroes of Socialist Labor, who made an enormous contribution to various spheres of social-economic, scientific and administrative work, where they displayed their talents and diverse abilities and demonstrated profound knowledge and abundant working experience.¹

In the 31st essay on well-known writers and journalists (editor-compiler is Doctor of Historical Sciences A. M. Sinitsyn), the reader will find material published for the first time on the very old underground revolutionary F. N. Petrov, and on famous scientists--the flag officer of mathematicians I. M. Vinogradov, the chief theorist of cosmonautics M. V. Keldysh, the Prometheus of the atomic age I. V. Kurchatov, prominent missile and aircraft designers S. P. Korolev and A. N. Tupolev. There are interesting essays on scientists--selectionists, the organizers and managers of industrial and agricultural production, and famous toilers in different sectors of our national economy.

A great deal unites these people, who differ in age, character, education and profession: industriousness, a thirst for knowledge, stubbornness in attaining a goal, kindness, a desire to share with people their labor "secrets" and adopt all the best from trainees, a constant readiness for labor exploits, the influence of personal example on working comrades, and their love for the Motherland, the people and the party of the great Lenin--the CPSU, the tested organizer and director of our victories in war, in the postwar reconstruction and development, and in the struggle for peace and progress of mankind.

1. "Schast'ye tvorcheskikh pobed. Ocherki o geroyakh truda" [The Happiness of Creative Victories: Essays on Heroes of Labor], Moscow, Politizdat, 1979, 360 pages.

Like all Soviet people, the scientists focused all their efforts on resolving defense tasks with the treacherous attack by fascist Germany on our homeland. For example, Kurchatov and A. P. Aleksandrov worked on the problem of the Navy's antimine defense, and Ya. B. Zel'dovich and Yu. B. Khariton worked on antitank grenades, powders and substitutes for explosives. In 1943 Kurchatov and Zel'dovich joined to solve the "uranium problem," and later to create an atomic weapon.

P. L. Kapitea achieved great success in obtaining inexpensive oxygen, which considerably accelerated the process of smelting steel and welding metal of extraordinary importance with the steadily growing needs of the fronts in tanks, aircraft, artillery, ammunition and other military equipment and weapons. After the war he immediately began working on high-power electronics, one of the most current problems of science (p 105).

Keldysh revealed the reasons and demonstrated ways to eliminate abrupt vibrations--flutter--arising during tests of new high-speed aircraft in certain conditions of flight, which often led to disasters. From the end of 1941 not one aircraft received a ticket to life without undergoing a thorough "flutter calculation." He also rid aviation of another disaster, shimmy, which is the rocking motion of the front wheels of an aircraft's tricycle landing gear at high speed during take-off and landing, which often led to a break in the wheel support and an aircraft accident. Matislav Vaeolodovich was awarded the USSR State Prize in 1942 and 1946 for these discoveries (p 114).

Some of the heroes of the essays (M. A. Braga, I. I. Brid'ko and A. V. Gitalov) covered the difficult path of war, completing it with the assault on Berlin, while aerial scouts A. V. Chuyev supplied the command element with reconnaissance data on groupings and regroupings of enemy forces in the tactical and operational depth of his defenses.

V. Ya. Litvinov did not meet the enemy face to face on the battlefield, but the aviation plant where he was chief engineer and later director produced 13,300 IL-2 ground attack aircraft for the front (p 183), dubbed the "Black Death" by the Hitlerites.

Many heroes did their weighty bit for victory over the fascists by selfless labor in agriculture, supplying the Armed Forces and workers with food and industry with raw materials.

Ya. B. Zel'dovich, M. V. Keldysh, I. V. Kurchatov, A. N. Tupolev and Kh. Tursunkulov were awarded the title Hero of Socialist Labor three times and 26 persons were awarded it twice for outstanding labor successes for the good of the Motherland. They demonstrated in practice the great vital force of Lenin's foresight of genius that "labor productivity is in the final account the most important, the chief element, for victory of the new social system."²

2. V. I. Lenin, "Polnoye sobraniye sochineniy" [Complete Collected Works], XXXIX, 21.

It should be noted in conclusion that the book "Shast'ye tvorcheskikh pobed," which is very well arranged polygraphically and well edited, would have gained even more had the essays been grouped by sections: science, industry and construction, agriculture.

For reasons not understood by the reader, the book has no essays on some three-time and two-time Heroes of Socialist Labor--academicians A. N. Nesmeyanov and A. P. Aleksandrov, USSR Academy of Sciences Corresponding Member N. L. Dukhov and others.

A necessary and valuable publication on famous people of our country has been greeted with great interest by Soviet readers.

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BOOK REVIEW: ARMY OF THE ALGERIAN REVOLUTION

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25 Jun 80 pp 80-81

[Review, published under the heading "Critique and Bibliography" by Doctor of Historical Sciences Col M. Semiryaga: "Army of the Algerian Revolution"]

[Text] The "Nauka" izdatel'stvo published a book by G. S. Kondrat'yev.¹ It is devoted to the establishment and combat activities of the Algerian Army of National Liberation (ANO) during the years of the war for independence (1954-1962).

The experience in forming the Algerian Army of Revolution has not lost its current nature even now. The fact is that conditions in Algeria largely resemble those in which national patriotic organizations now are functioning in South Africa.

The author divides the history of formation of the ANO into three stages on the basis of a thorough analysis of the available material on the dynamics of its size, weapons and features of combat activities. During the first phase (November 1954-October 1955) the Algerian patriots built up forces. By November 1955 the ANO numbered up to 6,000 volunteers (p 53). Weapons of ANO subunits improved (primarily through those captured in battle). The unity of military and political leadership of the national liberation movement was preserved in this phase, but the ANO still did not have supreme command entities.

As the book states, in the second phase (November 1955-August 1956) "the structure of command entities, of combat and auxiliary subunits as well as irregular formations was determined and worked out which was preserved in its basic features until the war's end" (pp 52-53). Having up to 13,500 fighting men by August 1956, the ANO was transformed into a disciplined revolutionary army linked closely with the people. Its soldiers were full of desire to fight and win no matter what (pp 71, 148). The Summan Congress

1. G. S. Kondrat'yev, "Armiya Alzhirskoy revolyutsii (Ocherki formirovaniya i boyevoy deyatel'nosti 1954--1962 gg.)" [Army of the Algerian Revolution (Essays on the Establishment and Combat Activities 1954-1962)], Moscow, "Nauka," 1979, 168 pages.

of Political and Military Leaders of the Algerian Revolution was of special importance. It summarized results of the second phase of establishment of the ANO and approved the structure of military-territorial formations, the authorized personnel of subunits, military ranks and insignia of service personnel (pp 133-134). The post of commander in chief of the ANO was established while preserving the unity of military and political leadership of the national liberation movement. In the third phase (September 1956-March 1962) the Army's organizational structure continued to improve and combat experience accumulated. A Ministry of Defense was formed in September 1958 and the ANO General Staff in January 1960.

Tactics changed with an increase in the size and an improvement in weapons of ANO subunits. While at the beginning of the war guerilla warfare was waged, primarily of a defensive character (p 28), at the end of 1955 subunit combat operations (up to battalion inclusive) began, which signified the ANO's shift to a maneuverable war. This was, however, premature. Operating in large subunits, the ANO often was not able to use its primary advantage--surprise (p 90). In March 1959 the ANO again returned to guerilla operations by small subunits (squad-platoon).

Fighting men of the "External Army," who delivered weapons and ammunition from Tunisia and Morocco, employed more diversified tactics. In 1957 they often had to overcome French barriers and screens hindering the movement of arms and ammunition from neighboring states into Algeria. Penetration tactics not only were improved during the fighting on the borders, but elements of the ANO's operational art also originated. Subunits of the "External Army" also gained experience in conducting raiding operations, which usually were accomplished by enveloping the southern flanks of the lines of French obstacles. In 1961-1962 the "External Army" received a certain amount of heavy infantry weapons. It also began to use successfully the tactics of attacks by fire against fortified posts of French troops covering the borders (p 138).

The author also devoted attention to an analysis of French troop operations. Before 1957 they employed the "spider web" tactics, i.e., they would set up a network of fortified posts controlling key positions in combination with a "sweep" of the terrain (pp 32-33). Poor results of such operations forced the French command to shift to "quadrant" or "domino" tactics. It would concentrate superior forces of the army, navy, police and gendarmerie in a preselected region ("quadrant") in an attempt to defeat the main ANO subunits (pp 94-97) by blockading them from the land and sea. But even this provided only a temporary effort. As a result the Algerian patriots succeeded in winning victory at the cost of unbelievable effort and sacrifice. On 18 March 1962 representatives of the Provisional Government of the Algerian Republic (VPAR) and the French government signed an agreement in the city of (Evian) on cessation of military actions. A new period had begun in the life of the ANO--defense of its achievements.

It should be noted in conclusion that along with a rather complete picture of the heroic struggle of the Algerian people for independence, one would like to have the book include more material on the solidarity of the peoples of other countries with the Algerian patriots and on the work of French communists who exposed the colonial nature of the war in Algeria. There should have been a more detailed demonstration of the noncombat operations of French troops (work of the "psychological" service, economic and other measures) employed against the ANO.

On the whole, however, the book "Armiya Alzhirekoy revolyutsii" is of considerable interest to Soviet historians, scientific workers and numerous readers interested in the problem of national liberation wars of the peoples of Africa since World War II.

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BIOGRAPHICAL DATA ON MARSHAL GOLIKOV

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 7, 1980 signed to press 25 Jun 80 pp 86-88

[Unattributed article, published under the heading "Military-Historical Dates": "Marshal of the Soviet Union F. I. Golikov (On the 80th Anniversary of His Birth)"]

[Text] The name of Mar SU Filipp Ivanovich Golikov,¹ an active participant in the Civil and Great Patriotic wars, is well known in our country. He was born on 16 (29) July 1900 to the family of a rural doctor's assistant in the village of Borisovo, now Katayakiy Rayon, Kurganskaya Oblast. After completing high school in the city of Kamyshlov, Filipp Golikov joined the Party of Bolsheviks in 1918 and became an active builder of Soviet power under the influence of the workers of this city near the Urals, who were in a revolutionary mood. That was a stern time. The internal and external reaction was attempting to stifle the Republic of Soviets. The young party member was yearning for the front. He was called into the Red Army in 1918. Machinegunner Golikov fought the enemies of the Revolution bravely at the Eastern Front as part of the 1st "Red Eagles" Volunteer Peasants' Communist Regiment, and then the 10th Moscow Rifle Regiment of the Special Brigade of the 3d Army.

After the Civil War Golikov was in party-political work. He gave it all his knowledge and accumulated experience and achieved good results in indoctrinating personnel of units and subunits.

After completing the Frunze Military Academy by correspondence, Golikov commanded the 61st Rifle Division, the 8th Separate Mechanized Brigade and the XLV Mechanized Corps of the Kiev Military District during the period 1933-1938.

In 1938 Corps Commissar Golikov took over the post of member of military council of the Belorussian Military District and then commander of an army

1. See also VOYENNO-ISTORICHESKIY ZHURNAL, No 7, 1970, pp 43-46 on Mar SU F. I. Golikov.

group of forces of the Kiev Special Military District. In commanding 6th Army he took part in a liberation campaign into the Western Ukraine. In July 1940 Lt Gen Golikov³ was appointed deputy chief of the General Staff and chief of the Main Intelligence Directorate. Filipp Ivanovich took part in carrying out important measures to increase the Red Army's combat readiness.

At the beginning of the Great Patriotic War Golikov headed the Soviet military mission to England and the United States. He held talks on the delivery of arms, combat equipment and strategic raw materials to the Soviet Union and achieved fulfillment of agreements made on giving mutual assistance.

In October 1941, during the fierce fighting for Moscow, Lt Gen Golikov was appointed commander of 10th Army of the Western Front, which successfully penetrated enemy defenses and rushed westward. During the offensive the army fought its way some 400 km.

In the spring of 1942 Golikov was moved from the position of commander of 4th Shock Army and appointed commander of the Bryansk Front and, in July of that same year, of the Voronezh Front. During the fierce September battles for Stalingrad Lt Gen Golikov commanded the 1st Guards Army and later became deputy commander of the Southeast (from 28 September 1942 the Stalingrad) Front. Under extremely difficult conditions, in coordination with other fronts, the troops of this front crushed the fascist German hordes in the great battle on the Volga.

During the general winter offensive of the Soviet Army in 1942/1943 Gen Golikov again was assigned to command the Voronezh Front. Together with the commander of 6th Army of the Southwestern Front, he organized and conducted the Ostrogozhsk-Rososh' Operation. In preparing for combat operations Golikov paid special attention to ensure that army commanders did not permit disengagement of enemy troops under the difficult winter conditions, encircled them boldly, split them to pieces and then destroyed them.

In moving into the offensive on 13 January 1943 Soviet soldiers penetrated enemy defenses and then encircled and split up the main body of his grouping into two isolated parts. As a result of the operation, front forces advanced up to 140 km in depth. Fifteen enemy divisions were totally routed and six divisions were crippled. Front forces captured over 86,000 officers and men.

Golikov's ability to make substantiated decisions and implement them persistently was displayed once again in this operation. Taking account of Filipp Ivanovich's services, the Soviet government conferred on him the military rank of colonel general on 19 January 1943 and on 28 January 1943 awarded him the Order of Suvorov 1st Class.

3. The military rank of lieutenant general was conferred on 4 July 1940.

5. "Sovetskaya Voen'naya Entsiklopediya" [Soviet Military Encyclopedia], Vol. 6, Voenizdat, 1978, p 150.

Golikov attached great importance in winning victory to effective and continuous party-political work among the troops and to indoctrinating personnel in a spirit of utter dedication to the socialist Motherland and hatred for the enemy.

In April 1943 Col Gen Golikov assumed the post of deputy people's commissar of defense of the USSR for personnel, and then in May 1943, chief of the Main Personnel Directorate; and in October 1944 he was simultaneously the USSR SNK [Council of People's Commissars] Plenipotentiary for Repatriation of USSR Citizens. Filipp Ivanovich coped successfully with this difficult work of enormous scope.

In the period 1930-1936 Golikov commanded a separate mechanized army. In 1936-1938 he was chief of the Military Academy of Armored Troops. In 1938 he was appointed chief of the Main Political Directorate of the Soviet Army and Navy. Filipp Ivanovich was at this high post for over four years.

Golikov participates actively in social and political life and has been elected a delegate of oblast party conferences and Communist Party congresses of union republics. He was a member of the Central Auditing Commission and member of the CPSU Central Committee (1961-1966). He was elected deputy to the supreme soviets of the RSFSR, Ukrainian SSR and Belorussian SSR and deputy to the USSR Supreme Soviet, 1st, 4th, 5th and 6th convocations.

Mar SU⁷ F. I. Golikov was awarded four orders of Lenin, the Order of October Revolution, four orders of Red Banner, the orders of Suvorov 1st Class and Kutuzov 1st Class, two orders of Red Star, the Order "For Service to the Motherland in the USSR Armed Forces," 3d Class, many medals as well as foreign orders.

From May 1962 up to the present time Golikov has held the post of inspector general in the Group of Inspectors General of the USSR Ministry of Defense. As much as his health permits, he continues to work productively for the good of our socialist Motherland.

7. This high rank was conferred on Golikov in May 1961.

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BIOGRAPHICAL DATA ON ADMIRAL KASATONOV

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[Article, published under the heading "Military-Historical Dates," by HSU
Chief of the Main Staff of the USSR Navy Flt Adm G. Yegorov: "Fleet Admiral
V. A. Kasatonov (on the 70th Anniversary of His Birth)"]

[Text] Flt Adm Vladimir Afanas'yevich Kasatonov was born on 21 July 1910 in
the city of Novyy Petergof (now the city of Petrodvorets, Leningradskaya
Oblast) to the family of an employee. He entered the Higher Naval School
imeni M. V. Frunze in 1927. In 1931 the school graduate was appointed navi-
gator aboard the submarine "Bol'shevik" of the Red Banner Baltic Fleet. In
December of that same year he was sent to study in the command classes of
the Training Detachment of Underwater Navigation imeni S. M. Kirov for his
zealous service. He later served aboard the submarine "Komissar." In late
1932 Kasatonov was transferred to the Pacific Fleet, where he served as
executive officer and, in May 1934, as commander of a submarine. Vladimir
Afanas'yevich and his subordinates steadfastly perfected their knowledge
and accomplished the operational training missions with high marks. One of
the performance appraisals of that period states: "The ship's combat train-
ing is on the whole excellent. Torpedo firings were performed excellently.
Kasatonov's submarine took first place in the division. He orients himself
confidently at sea. He is a strong-willed commander and a good navyman."¹

In the summer of 1938 two banner events occurred in the life of Kasatonov:
In May he was appointed commander of a division of submarines and several
days later the party organization of the 1st Brigade of Submarines of the
Pacific Fleet accepted him as a candidate for party membership.

Some time later Vladimir Afanas'yevich was a student in the command faculty
of the Naval Academy. On completing it, he was sent to the KBF [Red Banner
Baltic Fleet] to the position of chief of staff of a separate training
division of submarines. The Great Patriotic War began. Kasatonov already

1. "Personal File of V. A. Kasatonov," sheet 1.

was a thoroughly trained submarine officer with solid theoretical training and abundant experience in staff and command work. Considering all this, the command element appointed him senior commander-operator and later chief of a department of a directorate of the Main Naval Staff.

In December 1945 Rear Adm² Kasatonov was appointed chief of staff of the Kronshadt Naval Defense District (KNDR) of the KBV. In the period 1947-1949 he worked as chief of a department and assistant chief of a main directorate of the General Staff of the USSR VS [Armed Forces]. In 1949-1954 Kasatonov served in the positions of chief of staff and first deputy commander of the 5th VMF [Naval Fleet] and in April 1953 as chief of staff and first deputy commander of the Pacific Fleet. During those years qualitative changes were occurring in fleet weapons and equipment and its organizational structure was being improved. Kasatonov made his contribution toward accomplishing these important tasks. Beginning in November 1954 and for more than ten years Vladimir Afanas'yevich commanded the 8th VMF and the Pacific, Black Sea and Northern fleets in succession.

I recall how, after arriving in February 1962 to take command of the Northern Fleet, Adm Kasatonov vigorously began raising the combat readiness of ships and units. He paid an especially large amount of attention to combat training of nuclear-powered submarines and missile-carrying aircraft. Adm Kasatonov attached great importance to navigating submarines under ice conditions. Suffice it to say that in 1963 alone he himself traveled more than 3,460 nm aboard submarines and took part in an under-ice cruise to the North Pole. Kasatonov organized and personally saw to a number of voyages by submarines to the Arctic. Analyzing results of a recent voyage when the ship returned to base, the Fleet commander would generalize the positive experience and reveal shortcomings. He was helped in this by extensive operational-tactical training and a thorough knowledge of equipment.

In June 1964 Kasatonov was appointed first deputy commander and member of military council of the Navy. Holding this post more than ten years, the Fleet admiral³ devoted careful attention to a study and generalization of the experience of the fleets' combat operations in the past war, to building a balanced Navy and especially to the development of submarines, which along with naval missile-carrying aviation became the chief shock force of the Fleet. Kasatonov approached the solution to all problems here from a scientific standpoint.

By his energy, persistence and attentive attitude toward people, Vladimir Afanas'yevich inspired in subordinates initiative and the desire to take an imaginative approach to matters. He was steadfastly concerned for the selection and placement of cadres, maintained close ties with political entities and took an active part in political indoctrination work.

2. The military rank of rear admiral was conferred on 24 May 1945.

3. Military rank of fleet admiral was conferred on Kasatonov on 18 June 1965.

I had occasion to serve together with Vladimir Afanas'yevich in the late 1930's. It was pleasant and easy to work with him.

Kasatonov was elected delegate to the 20th-24th CPSU congresses, deputy to the USSR Supreme Soviet, 5th-9th convocations, and deputy to the Supreme Soviet of Estonian SSR; and twice to the Central Committee of the KPU [Communist Party of the Ukraine].

The Communist Party and Soviet government highly valued the services of Kasatonov. He was awarded the title of Hero of the Soviet Union and decorated with three orders of Lenin, two orders of Red Banner, two orders of Labor Red Banner, the orders of Nakhimov 2d Class and Patriotic War 1st Class, two orders of Red Star, the Order "For Service to the Motherland in the USSR Armed Forces" 3d Class, many medals as well as orders and medals of a number of foreign states.

In September 1974 Kasatonov became military inspector-adviser of the Group of Inspectors-General of the USSR Ministry of Defense. We wish Flt Adm Kasatonov good health and success in increasing the combat might of the Soviet Navy on his 70th birthday.

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BIOGRAPHICAL DATA ON GENERAL MAL'TSEV

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[Article, published under the heading "Military-Historical Dates," by HSU Arm Gen P. Lashchenko: "Army General Ye. Ye. Mal'tsev (on the 70th Anniversary of His Birth)"]

[Text] The biography of Yevdokim Yegorovich Mal'tsev largely is similar to the biographies of other military leaders and prominent political workers who came from the people and whose talent and abilities were uncovered fully thanks to Soviet power and the party's paternal concern.

Mal'tsev was born on 15 July 1910 in the village of Lutoshkino, of former Orlovskaya and now Lipetskaya Oblast, Krasninskiy Rayon, to a large family of a poor peasant who was tortured in the chambers of the Czar's secret political police for revolutionary agitation.

Mal'tsev began his labor activities early. He became a worker already at age 16. In 1931 an important event occurred in his life: He joined the ranks of the Communist Party. Yevdokim Yegorovich worked for almost three years in his native rayon as inspector of criminal investigations. Together with his comrades, he conducted a selfless struggle against enemies of Soviet power: the kulaks, bandits, speculators and embezzlers of state property.

In response to the party's call and the command of his heart, Mal'tsev entered the Poltava Military-Political School in 1933. After completing it in 1935 he was appointed to the position of company politruk, then became politruk of a regimental school, regimental commissar and, in 1938, commissar of a rifle division commanded by future Mar SU F. I. Tolbukhin.

During the Great Patriotic War Yevdokim Yegorovich traveled the frontline paths and roads from its first to its last day. Being chief of political department of a combined unit and a formation and later member of military council of a number of armies in succession, Mal'tsev took an active part in accomplishing difficult tasks. Front destiny brought him together with

such party and state figures, political workers and military leaders as A. A. Zhdanov, L. I. Brezhnev, A. A. Kuznetsov, R. Ya. Malinovskiy, L. A. Govorov, I. D. Chernyakhovskiy and I. S. Konev. The contact with these remarkable people was, as Yevdokim Yegorovich emphasized more than once, a good school for him which taught him to think broadly and on a large scale, take a fundamental party approach to the assessment of daily phenomena, and bring a job once begun to completion.

Mal'tsev took part in drawing up and accomplishing a number of important operations, among which is the Novorossiysk-Taman' Operation.

While a member of the military council of 21st Army, Mal'tsev took an active part in preparing and accomplishing operations on the Northwest Axis, on the Karelian Peninsula. The resolute offensive by forces of this formation during the Vyborg Operation, which was crowned by the penetration of powerful enemy defenses and the taking of Vyborg, was largely the result of vigorous and continuous party-political work.

Yevdokim Yegorovich also capably organized the work of party-political and logistical support to a thousand-kilometer march by 21st Army, when it was shifted to the 3d Belorussian Front and later the 1st Ukrainian Front for participation in the Vistula-Oder and Upper Silesian operations and in the liberation of Czechoslovakia.

The war did not end for Mal'tsev with the victory over fascist Germany. He was sent to the Far East to the 15th Army in the position of member of military council. Together with the commanders and political workers, Yevdokim Yegorovich prepared the personnel of this formation for the Sungari Offensive Operation. The 15th Army was given the main role to play in the assault crossing of the swollen Amur and exploitation of success in a broad zone of advance. Army forces performed this mission honorably.

After World War II ended the party and government entrusted Mal'tsev with responsible posts in the Armed Forces. In various years he was member of military council and chief of political directorate of the Turkestan, Baltic and Carpathian military districts. In 1954 he successfully completed the General Staff Military Academy. Grown wise from frontline experience which had been theoretically interpreted in the Academy and with a good knowledge of demands of modern warfare, Mal'tsev performed extensive work of perfecting the training and indoctrination of personnel.

In 1967 Mal'tsev was appointed member of military council of the Group of Soviet Forces in Germany. Here for almost five years he managed to do much to improve party-political work and increase troop combat readiness. Strengthening of the indestructible friendship of the Soviet soldiers with workers of the German Democratic Republic and personnel of its Army was an object of his special attention. Yevdokim Yegorovich established close contacts with party, state and military figures of the GDR--W. Ulbricht, E. Honecker, W. Stoph, H. Hoffmann and other comrades.

The meetings and discussions on German soil with CPSU Central Committee General Secretary L. I. Brezhnev during the work of the 8th SED Congress as well as his vivid speech at the forum of the fraternal party, in which he mentioned the need for joint defense of peace against the imperialist aggressors, were of great importance for Mal'tsev. Leonid Il'ich's practical advice, as Yevdokim Yegorovich recalls, gave the command element of the Group of Forces a new charge of energy and oriented it on a critical analysis of the work performed.

Mal'tsev's abilities were revealed in a new manner at the post of chief of the Orders of Lenin and October Revolution, Red Banner Military-Political Academy imeni V. I. Lenin, which he has headed for some ten years already. Topical plans and training programs were successfully improved under his direction. Fulfilling the CPSU's decisions on development of the higher school and demands of the USSR Minister of Defense and the Chief of the Main Political Directorate of the Soviet Army and Navy, Mal'tsev and the Academy collective he heads did a great deal to improve the training and indoctrination process and introduce new forms and methods into it. The logistical base of the VPA [Military-Political Academy] has been strengthened considerably in recent years and its ties with the troops and local party organizations have become stronger.

Arm Gen Mal'tsev takes an active part in scientific generalization of the experience of party-political work. He is the head of the group of authors of the book "Partiya i armiya" [The Party and the Army]. The monograph entitled "The CPSU is the Organizer of Defense of the Socialist Homeland" and the book entitled "Akademiya imeni V. I. Lenina" [Academy imeni V. I. Lenin] is being published under his general editorship. He also has written a number of articles of a military-theoretical character. Recently his front memoirs entitled "V gody ispytaniy" [In the Years of Ordeals] were published. This is a frank and instructive narrative by a war veteran about the sources of our victory in the Great Patriotic War.

The entire life and productive work of Arm Gen Mal'tsev is an example of selfless service to the Communist Party and Soviet Motherland. He participates actively in social-political life of the country, has been elected delegate to the 21st, 22d, 23d, 24th and 25th CPSU congresses and to local and party entities, and was a deputy to the supreme soviets of Armenia, Uzbekistan, Latvia, the Ukraine and the USSR Supreme Soviet, 5th and 8th convocations. He now is a deputy of the Mossovet [Moscow City Soviet of Workers' Deputies]. The Motherland highly valued Yevdokim Yegorovich's services. He has been awarded an Order of Lenin, six orders of Red Banner, the orders of Patriotic War 1st Class and "For Service to the Motherland in the USSR Armed Forces" 3d Class, many medals as well as foreign orders.

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